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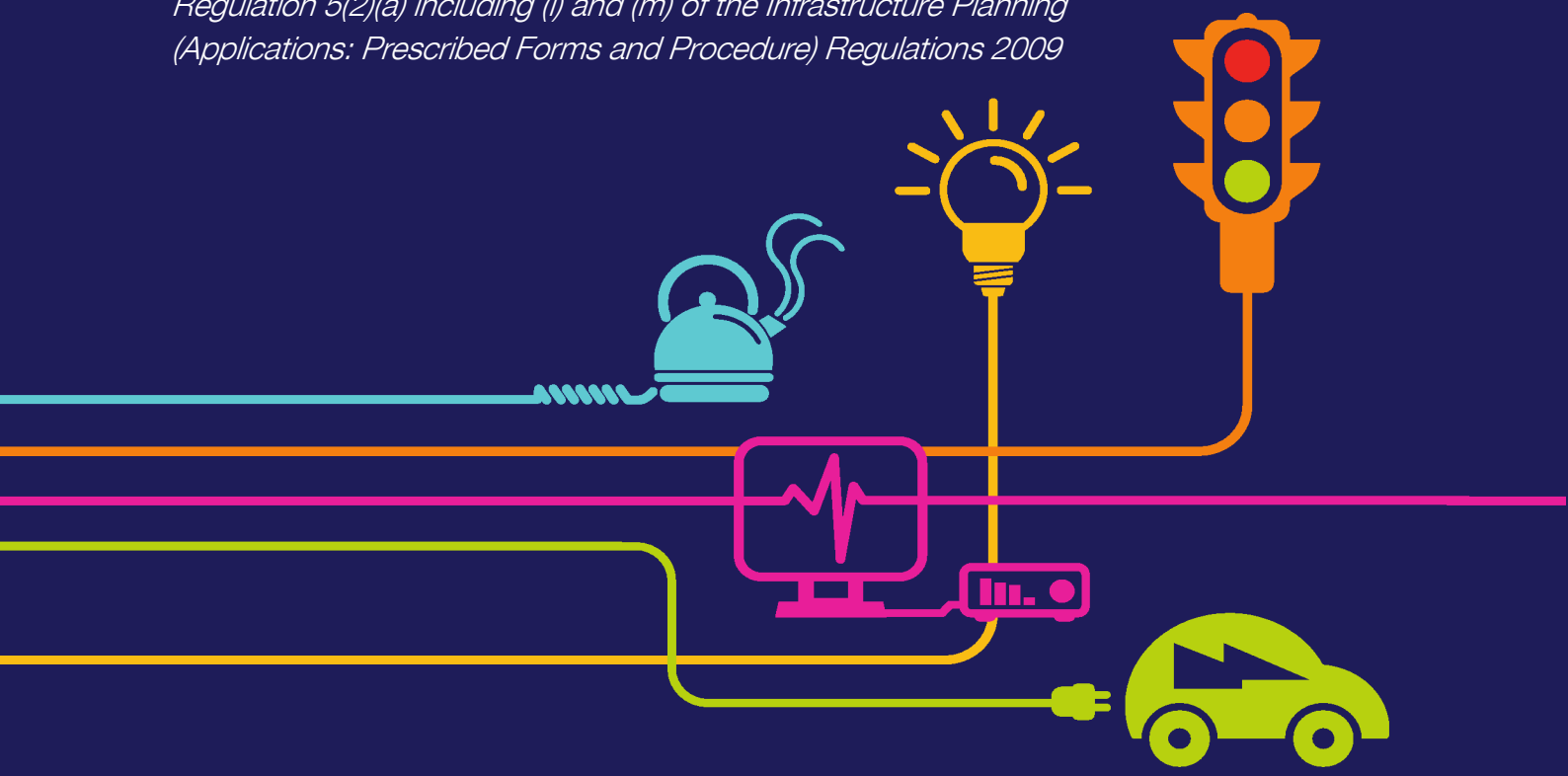
DOCUMENT 5.13.2.1 (Part 2 of 2)

Transport Assessment

Chapter 13 – Appendix 1

National Grid (North Wales Connection Project)

Regulation 5(2)(a) including (l) and (m) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009



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North Wales Connection Project

Volume 5

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Part 2 of 2 Annexes I - N

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North Wales Connection Project

Transport Assessment – ANNEX I

Base Model Queue Validation Report

National Grid
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1 Junction Model Validation

1.1 2017 BASE MODEL VALIDATION RESULTS

1.1.1 This document outlines the results of the model validation exercise relating to the Junctions 8 (ARCADY and PICADY Modules) and LinSig Assessment of the highway junctions within the North Wales Connection (NWC) Transport Assessment (TA) study area. Isle of Anglesey County Council (IACC) and Gwynedd Council requested that the queue lengths presented within model outputs are validated against on site survey data in their written comments received on 15 February 2018 in response to the draft Environmental Statement documentation submitted to the Local Highway Authorities in Batch 2.

1.1.2 Queueing observations were obtained for each junction listed on the date on which Manual Classified Turning Counts (MCTCs) were conducted. The MCTCs also provided the turning flows represented within the models.

1.1.3 Results are presented separately for each of the junctions listed in **Table 1.1**. Each individual results table contained within the validation pro forma lists:

- **Observed Mean Queue –** The average of maximum queues observed during each five minute period.
- **Modelled Mean Queue –** The average queue estimated by ARCADY for the time period.
- **Observed Maximum Queue –** The maximum queue observed within the corresponding 15 minute period.
- **Modelled 95th Percentile Queue –** The queue length predicted to be exceeded 5% of the time.
- **Mean Maximum Queue (MMQ) –** The average maximum queue across all cycles for each entry arm. (LinSig models only)

Table 1.1: Validation Criteria Key	
	The observed and modelled data is considered to accord well, with only minor discrepancies between observed and modelled queue lengths.
	There are discrepancies between the modelled and observed data but the differences are not considered great enough to invalidate the model. Further explanation may found within the comments below the results validation tables.
	The model outputs are not validated by the observed data.
	Queue data unavailable/ no base model

1.1.4 Table 1.2 presents the junctions considered within this report and in the TA. Please note that the junctions in grey have not been subject to the validation exercise for the following reasons. :

- Junctions 19 & 20: queue survey data is unavailable in this location. Explanatory comments are provided under the associated heading.
- Junction 34 & 35 are proposed new junctions within the Proposed Development and hence it was not possible to survey these locations.
- The turning flows for junctions 36-40 were extracted directly from the Llangefni Link Road TA (produced by IACC), so no queue data was available to AECOM.
- Junction 41 is considered within the Horizon VISSIM model, and no queue data was available to AECOM.

Table 1.2: Junction Validation Summary

Junction Ref	Name	Type	Validation	Modelling Package
1	A5025/ Wylfa Access	Priority		Junctions 8 (PICADY)
2	A5/ A5025	Signal		LinSig
3	A55 J3	Roundabout		Junctions 8 (ARCADY)
4				
5	B5111/ B5112 Llanerchymedd	Mini Roundabout		Junctions 8 (ARCADY)
6	A5/ A4080/ B5112 Treban	Crossroad		Junctions 8 (PICADY)
7	A55 J5	Roundabout		Junctions 8 (ARCADY)
8				
9	B5111/ Bachau Llanerchymedd	Priority		Junctions 8 (PICADY)
10	B5111/ B5110	Priority		Junctions 8 (PICADY)
11	B5110/ Ffordd Cae Sel	Mini Roundabout		Junctions 8 (ARCADY)
12	B5420/ Ffordd Cae Sel	Mini Roundabout		Junctions 8 (ARCADY)
14	A55 J6	Roundabout		Junctions 8 (ARCADY)
15				
16	A55 J7	Priority		Junctions 8 (PICADY)
17				
18	A5/ A5152	Roundabout		Junctions 8 (ARCADY)
19	A5/NCR8 Llandaniel	Priority		Junctions 8 (PICADY)

Table 1.2: Junction Validation Summary

Junction Ref	Name	Type	Validation	Modelling Package
20	A5/Star Overbridge	Priority		Junctions 8 (PICADY)
21	J7A/ A5/ Pont Ronwy Link	Staggered Crossroads		Junctions 8 (PICADY)
22				
23	A5/A4080 Tollgate	Staggered Crossroads		Junctions 8 (PICADY)
24	A55 J8	Priority		Junctions 8 (PICADY)
25				
26	A5025/ B5420 Four Crosses	Roundabout		Junctions 8 (ARCADY)
27	A55 J8A	Priority		LinSIG*(Separate technical note produced and appended to the TA.
28				
29	A55 J9	Roundabout		Junctions 8 (ARCADY)
30				
31	B4547 Nant-y-Garth	Priority		Junctions 8 (PICADY)
32	A4244/ B4547/ B4366	Roundabout		Junctions 8 (ARCADY)
33	A5/ A4244	Roundabout		Junctions 8 (ARCADY)
34	A5025 / Access A5a	Priority		Junctions 8 (PICADY)
35	B4547/ Pentir Access F14	Priority		Junctions 8 (PICADY)

Table 1.2: Junction Validation Summary

Junction Ref	Name	Type	Validation	Modelling Package
36	LLR 1	Roundabout		Junctions 8 (ARCADY)
37	LLR 2	Roundabout		Junctions 8 (ARCADY)
38	LLR 3	Roundabout		Junctions 8 (ARCADY)
39	LLR 4	Roundabout		Junctions 8 (ARCADY)
40	LLR 5	Roundabout		Junctions 8 (ARCADY)
41	A487/ A4087/ B4547	Roundabout		Junctions 8 (ARCADY)
42	UR 4/ B5111	Priority		Junctions 8 (PICADY)

2 Junction Ref 1: A5025 / Wylfa Access

Time	WYLFA ACCESS ROAD				A5025 TURNING RIGHT			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
07:30:00	0.00	0.00	0.00	1.00	1.42	0.00	4.26	1.00
07:45:00	0.00	0.00	0.00	1.00	2.13	0.00	4.26	1.00
08:00:00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
08:15:00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
Average	**0.00**	**0.00**	**0.00**	**1.00**	**0.89**	**0.00**	**2.13**	**1.00**

Time	WYLFA ACCESS ROAD				A5025 TURNING RIGHT			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
17:00:00	0.71	0.00	2.13	1.00	0.00	0.00	0.00	1.00
17:15:00	0.71	0.00	2.13	1.00	0.00	0.00	0.00	1.00
17:30:00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
17:45:00	0.71	0.00	2.13	1.00	0.00	0.00	0.00	1.00
Average	**0.53**	**0.00**	**1.60**	**1.00**	**0.00**	**0.00**	**0.00**	**1.00**

Comments:
Modelled queue values accord well with the observed data. Generally, observed queues are very low at this location. It is noted that an observed maximum queue of 4.26PCU was recorded in the AM peak along the A5025, however this is likely to be a result of arrival rate given it is the main access to the existing Wylfa site and this rate could be a short spike in demand dictated by shift patterns.

3 Junction Ref 2: A5 / A5025 Valley Crossroads

Time	A5 FROM HOLYHEAD		A5025		A5 FROM J3		STATION ROAD	
	Observed MMQ	LinSig MMQ	Average	LinSig MMQ	Average	LinSig MMQ	Average	LinSig MMQ
AM (0800 - 0900)	3.46	2.40	5.59	2.30	3.99	2.50	3.91	2.20
Time	A5 FROM HOLYHEAD		A5025		A5 FROM J3		STATION ROAD	
	Average	LinSig MMQ	Average	LinSig MMQ	Average	LinSig MMQ	Average	LinSig MMQ
PM (1630 - 1730)	3.73	2.80	3.37	2.00	4.88	3.50	3.11	2.50

Comments:

The LinSig outputs accord well with the observed data. All modelled queues are of a similar magnitude to the observed data for both the AM and PM peak hours.

4 Junction Ref 3 & 4: A55 Junction 3

Time	A5 FROM VALLEY				A55 E/B OFF			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	1.00	0.38	3.00	1.00	0.00	0.06	0.00	1.00
08:15:00	0.00	0.52	0.00	1.00	0.00	0.07	0.00	1.00
08:30:00	0.00	0.52	0.00	1.00	0.00	0.07	0.00	1.00
08:45:00	1.33	0.39	2.00	1.00	1.33	0.06	2.00	1.00
Average	**0.58**	**0.45**	**1.25**	**1.00**	**0.33**	**0.07**	**0.50**	**1.00**
Time	**A5 FROM CAERGEILIOG**				**A55 W/B OFF**			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	0.00	0.11	0.00	1.00	0.67	0.13	2.00	1.00
08:15:00	0.00	0.13	0.00	1.00	0.00	0.17	0.00	1.00
08:30:00	0.00	0.14	0.00	1.00	0.00	0.17	0.00	1.00
08:45:00	0.67	0.11	2.00	1.00	0.00	0.13	0.00	1.00
Average	**0.17**	**0.12**	**0.50**	**1.00**	**0.17**	**0.15**	**0.50**	**1.00**

Time	A5 FROM VALLEY				A55 E/B OFF			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:30:00	0.67	0.38	2.00	0.67	0.67	0.06	2.00	1.00
16:45:00	0.00	0.52	0.00	0.00	0.00	0.07	0.00	1.00
17:00:00	1.00	0.52	3.00	1.00	0.00	0.07	0.00	1.00
17:15:00	0.00	0.39	0.00	0.00	0.00	0.06	0.00	1.00
Average	**0.42**	**0.45**	**1.25**	**0.42**	**0.45**		**0.50**	**1.00**

Time	A5 FROM CAERGEILIOG				A55 W/B OFF			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:30:00	1.67	0.11	3.00	1.00	0.00	0.13	0.00	1.00
16:45:00	0.00	0.13	0.00	1.00	0.00	0.17	0.00	1.00
17:00:00	0.67	0.14	2.00	1.00	0.00	0.13	0.00	1.00
17:15:00	0.67	0.11	2.00	1.00	0.00	0.13	0.00	1.00
Average	**0.75**	**0.12**	**1.75**	**1.00**	**0.75**	**0.14**	**0.00**	**1.00**

Comments:

Modelled queue values accord well with the observed data. Generally, observed queues are very low at this location. Maximum values from observed data represents short lived stacking of vehicles on approaches. The model is considered to broadly

represent the typical operation of the junctions well.

5 Junction Ref 5: B5111 / B5112 Roundabout

Time	B5112				B5111 FROM LLANGEFNI				B5111 FROM RHOSYBOL			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	0.00	0.08	0.00	1.00	0.00	0.15	0.00	1.00	1.07	0.27	3.20	1.00
08:15:00	0.00	0.10	0.00	1.00	0.00	0.19	0.00	1.00	1.07	0.36	3.20	1.00
08:30:00	0.00	0.10	0.00	1.00	0.71	0.19	2.13	1.00	0.00	0.36	0.00	1.00
08:45:00	0.71	0.08	2.13	1.00	0.00	0.15	0.00	1.00	1.07	0.27	3.20	1.00
Average	**0.18**	**0.09**	**0.53**	**1.00**	**0.18**	**0.17**	**0.53**	**1.00**	**0.80**	**0.32**	**2.40**	**1.00**
Time	B5112				B5111 FROM LLANGEFNI				B5111 FROM RHOSYBOL			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:30:0	1.42	0.11	2.13	1.00	0.00	0.42	0.00	1.00	1.78	0.15	3.20	1.00

0												
16:45:00	0.71	0.15	1.07	1.00	0.00	0.57	0.00	1.00	1.42	0.19	4.26	1.00
17:00:00	0.71	0.15	1.07	1.00	0.00	0.58	0.00	1.00	0.00	0.19	0.00	1.00
17:15:00	1.07	0.11	2.13	1.00	0.71	0.43	2.13	1.00	0.71	0.15	2.13	1.00
Average	**0.98**	**0.13**	**1.33**	**1.00**	**0.18**	**0.50**	**0.53**	**1.00**	**0.98**	**0.17**	**2.40**	**1.00**

Comments:
Modelled queue values accord well with the observed data. Generally, observed queues are very low at this location. Maximum values from observed data represent short lived stacking of vehicles on approaches. For example, the maximum queue of 4.26 PCUs observed during the interval commencing 16:45 at the B5111 from Rhosybol was followed by a subsequent period where no queues were observed. Consequently, the model is considered to represent an acceptable representation of the operation of this junction.

6 Junction Ref 6: A5 / A4080 / B5112 Treban Crossroads

Time	A5 BRYNGWRAN				A5 GWALCHMAI			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
08:15:00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
08:30:00	0.71	0.00	2.13	1.00	0.00	0.00	0.00	1.00
08:45:00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
Average	**0.18**	**0.00**	**0.53**	**1.00**	**0.00**	**0.00**	**0.00**	**1.00**

Time	A4080				B5112			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	1.78	0.32	3.20	1.00	0.71	0.14	2.13	1.00
08:15:00	2.84	0.41	5.33	1.00	3.55	0.18	4.26	1.00
08:30:00	2.84	0.41	3.20	1.00	1.42	0.18	2.13	1.00
08:45:00	2.13	0.32	2.13	1.00	0.71	0.14	2.13	1.00
Average	**2.40**	**0.37**	**3.47**	**1.00**	**1.60**	**0.16**	**2.66**	**1.00**

Time	A5 BRYNGWRAN				A5 GWALCHMAI			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:30:00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
16:45:00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
17:00:00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
17:15:00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
Average	**0.00**	**0.00**	**0.00**	**1.00**	**0.00**	**0.00**	**0.00**	**1.00**
Time	A4080				B5112			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:30:00	2.13	0.40	4.26	1.00	0.00	0.07	0.00	1.00
16:45:00	2.84	0.53	3.20	1.00	0.00	0.09	0.00	1.00
17:00:00	1.78	0.53	3.20	1.00	0.00	0.10	0.00	1.00
17:15:00	2.13	0.40	3.20	1.00	0.71	0.07	2.13	1.00
Average	**2.22**	**0.47**	**3.47**	**1.00**	**0.18**	**0.08**	**0.53**	**1.00**

Comments:

The model was validated for all arms. Minimal queuing was observed on the A5 and B5112 arms in the AM and PM peak and this is reflected by the Junctions 8 model. Whilst the model did not present the same degree of queueing as the on-site observations the

maximum queue observed was a max of 5 during a 5 minute period in the AM peak. It is considered that this level of queueing is reflective of the short peaks in arrival rates that are not captured well by the PICADY model. Consequently it is considered that, on balance, the model is an appropriate tool to assess the impact of traffic associated with the Proposed Development.

7 Junction Ref 7 & 8: A55 Junction 5

Time	A4080 TREBAN				A55 E/B OFF			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	0.00	0.00	0.00	1.00	0.67	0.00	2.00	1.00
08:15:00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
08:30:00	0.00	0.00	0.00	1.00	1.00	0.00	3.00	1.00
08:45:00	0.00	0.00	0.00	1.00	1.00	0.00	3.00	1.00
Average	**0.00**	**0.00**	**0.00**	**1.00**	**0.67**	**0.00**	**2.00**	**1.00**
Time	A4080 FROM RHOSNEIGR				A55 W/B OFF			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	0.67	0.00	2.00	1.00	0.00	0.00	0.00	1.00
08:15:00	0.67	0.00	2.00	1.00	0.00	0.00	0.00	1.00
08:30:00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
08:45:00	0.00	0.00	0.00	1.00	0.67	0.00	2.00	1.00
Average	**0.33**	**0.00**	**1.00**	**1.00**	**0.17**	**0.00**	**0.50**	**1.00**

Time	A4080 TREBAN				A55 E/B OFF			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:00:00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
16:15:00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
16:30:00	0.00	0.00	0.00	1.00	0.67	0.00	2.00	1.00
16:45:00	0.00	0.00	0.00	1.00	0.67	0.00	2.00	1.00
Average	**0.00**	**0.00**	**0.00**	**1.00**	**0.33**	**0.00**	**1.00**	**1.00**
Time	**A4080 FROM RHOSNEIGR**				**A55 W/B OFF**			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:00:00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
16:15:00	0.67	0.00	2.00	1.00	0.00	0.00	0.00	1.00
16:30:00	0.00	0.00	0.00	1.00	1.00	0.00	3.00	1.00
16:45:00	1.33	0.00	2.00	1.00	1.33	0.00	2.00	1.00
Average	**0.50**	**0.00**	**1.00**	**1.00**	**0.58**	**0.00**	**1.25**	**1.00**

Comments:

The junction was observed to experience very low queueing on all arms. A maximum of 3 PCU was noted during the survey. Whilst the ARCADY outputs, particularly the 95th percentile, are less than the maximums observed however, this is considered to reflect

the fact that ARCADY does not identify short spikes in queuing that would be observed in reality. Consequently, the model is considered to represent the overall operation of the model well.

8 Junction Ref 9: B5111 / Bachau Llanerchymedd

Time	UNNAMED ROAD BACHAU				B5111 FROM LLANGEFNI			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
08:15:00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
08:30:00	0.71	0.00	2.13	1.00	0.00	0.00	0.00	1.00
08:45:00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
Average	**0.18**	**0.00**	**0.53**	**1.00**	**0.00**	**0.00**	**0.00**	**1.00**
Time	UNNAMED ROAD BACHAU				B5111 FROM LLANGEFNI			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:30:00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
16:45:00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
17:00:00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
17:15:00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
Average	**0.00**	**0.00**	**0.00**	**1.00**	**0.00**	**0.00**	**0.00**	**1.00**
Comments:								

Modelled queue values accord well with the observed data. Generally, observed queues are very low at this location. No queueing was observed during the PM Peak Hour. Consequently, the model is considered to represent an acceptable approximation of the operation of this junction.

9 Junction Ref 10: B5111 / B5110

Time	B5110				B5111			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	0.00	0.01	0.00	1.00	3.20	1.10	4.26	2.00
08:15:00	0.00	0.02	0.00	1.00	4.26	1.96	5.33	6.00
08:30:00	0.00	0.02	0.00	1.00	1.78	2.04	3.20	5.00
08:45:00	0.00	0.01	0.00	1.00	3.20	1.20	4.26	3.00
Average	**0.00**	**0.02**	**0.00**	**1.00**	**3.11**	**1.58**	**4.26**	**4.00**
Time	B5110				B5111			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:45:00	0.00	0.00	0.00	1.00	0.71	0.33	2.13	1.00
17:00:00	0.00	0.00	0.00	1.00	2.84	0.48	4.26	1.00
17:15:00	0.00	0.00	0.00	1.00	0.00	0.48	0.00	1.00
17:30:00	0.00	0.00	0.00	1.00	1.42	0.34	2.13	1.00
Average	**0.00**	**0.00**	**0.00**	**1.00**	**1.24**	**0.41**	**2.13**	**1.00**
Comments:								

Almost no queuing was observed on the B5110. This is reflected in the ARCADY model which predicts a negligible average queue in the AM peak. On the B5111, the observed queues in the AM reflect the 95th percentile queues predicted by ARCADY. Whilst ARCADY does not predict PM queues higher than 1 PCU, the maximum observed queues of 2 and 4 are likely to reflect short lived queues arising from groupings of vehicles.

10 Junction Ref 11: B5110 / Ffordd Cae Sel

Time	B5110 SOUTH				B5110 NORTH				FFORDD CAE SEL			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	1.07	0.97	3.20	2.00	0.71	1.68	2.13	4.00	0.00	0.29	0.00	1.00
08:15:00	1.78	1.62	3.20	3.00	1.78	4.00	3.20	15.00	0.71	0.41	2.13	1.00
08:30:00	2.84	1.60	3.20	3.00	1.78	4.31	3.20	14.00	0.71	0.41	2.13	1.00
08:45:00	3.91	1.00	5.33	2.00	3.55	1.83	4.26	6.00	1.42	0.30	4.26	1.00
Average	**2.40**	**1.30**	**3.73**	**2.50**	**1.95**	**2.96**	**3.24**	**9.75**	**0.71**	**0.35**	**2.13**	**1.00**
Time	B5110 SOUTH				B5110 NORTH				FFORDD CAE SEL			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile

16:30:00	4.62	1.64	6.39	4.00	1.78	0.68	3.20	1.00	0.71	0.96	2.13	1.00
16:45:00	0.00	3.96	0.00	14.00	0.00	1.08	0.00	2.00	0.00	1.60	0.00	3.00
17:00:00	3.20	4.24	4.26	13.00	1.07	1.10	3.20	2.00	2.84	1.63	3.20	2.00
17:15:00	3.91	1.77	5.33	6.00	0.71	0.70	2.13	1.00	1.42	1.00	2.13	2.00
Average	**2.93**	**2.90**	**4.00**	**9.25**	**0.89**	**0.89**	**2.13**	**1.50**	**1.24**	**1.30**	**1.87**	**2.25**

Comments:
The junction overall was observed to experience little queuing throughout the AM and PM peak Notwithstanding that, longer queues were observed in the PM peak hour on the B5110 South. This is reflected within the average and 95th percentile queues estimated by the ARCADY model. The model is considered to reflect the typical operation of this junction.

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11 Junction Ref 12: B5420 / Ffordd Cae Sel

Time	B5420				MILL ST				FFORDD CAE SEL			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	1.78	0.95	3.20	1.00	0.71	0.12	2.13	1.00	0.71	1.61	2.13	4.00
08:15:00	2.49	1.54	4.26	2.00	0.00	0.17	0.00	1.00	0.00	3.02	0.00	10.00
08:30:00	1.78	1.57	3.20	2.00	0.71	0.18	2.13	1.00	1.07	2.15	3.20	7.00
08:45:00	1.78	0.99	3.20	2.00	1.42	0.13	2.13	1.00	0.71	1.73	2.13	5.00
Average	**1.95**	**1.26**	**3.55**	**1.75**	**0.71**	**0.15**	**1.60**	**1.00**	**0.62**	**2.13**	**1.87**	**6.50**
Time	B5420				MILL ST				FFORDD CAE SEL			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:15:00	1.42	2.33	2.13	7.00	3.91	1.13	5.33	2.00	2.13	1.58	2.13	4.00
16:30:00	2.84	6.18	3.20	24.00	4.97	3.26	6.39	12.00	0.00	2.99	0.00	10.00
16:45:00	2.49	7.00	3.20	27.00	4.62	3.89	5.33	14.00	0.71	3.12	2.13	7.00
17:00:00	6.75	2.65	10.65	9.00	12.43	1.35	14.91	4.00	5.33	1.71	10.65	5.00
Average	**3.37**	**4.54**	**4.80**	**16.75**	**6.48**	**2.41**	**7.99**	**8.00**	**2.04**	**2.35**	**3.73**	**6.50**

Comments:
The ARCADY average and 95th percentile queue lengths reflect the observed queues, particularly during the PM peak at the Mill Street and Ffordd Cae Sel arms. Consequently, the model is considered to represent an acceptable approximation of the operation of this junction.

12 Junction Ref 14 & 15: A55 Junction 6

Time	A5114 FROM LLANGEFNI				A5 FROM GWALCHMAI				A55 EASTBOUND OFF-SLIP			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	9.23	1.21	12.78	3.99	4.62	2.56	5.33	8.63	2.49	0.90	5.33	3.58
08:15:00	9.59	2.22	11.72	6.61	11.36	13.41	19.17	35.89	5.68	2.93	6.39	10.36
08:30:00	6.75	2.23	8.52	7.07	14.91	19.78	21.30	51.68	3.55	2.81	5.33	9.83
08:45:00	5.33	1.16	7.46	4.10	6.39	4.88	7.46	21.48	6.39	0.91	8.52	3.74
Average	**7.72**	**1.71**	**10.20**	**5.44**	**9.32**	**10.16**	**13.32**	**29.42**	**4.53**	**1.89**	**6.39**	**6.88**
Time	A5 FROM GAERWEN				A55 WESTBOUND OFF-SLIP				W/B RBT TO E/B RBT			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	3.20	0.90	4.26	3.69	7.10	1.55	9.59	5.16	1.67	0.79	3.00	3.70
08:15:00	6.75	2.39	8.52	8.60	5.33	4.92	6.39	16.61	0.67	1.84	2.00	7.24
08:30:00	4.26	2.33	7.46	8.37	4.26	4.81	5.33	16.71	3.33	1.91	4.00	7.96
08:45:00	4.26	0.84	6.39	3.37	6.04	1.55	7.46	5.94	0.00	0.84	0.00	3.37
Average	**4.62**	**1.62**	**6.66**	**6.00**	**5.68**	**3.21**	**7.19**	**11.10**	**1.42**	**1.35**	**2.25**	**5.61**

Time	A5114 FROM LLANGEFNI				A5 FROM GWALCHMAI				A55 EASTBOUND OFF-SLIP			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:30:00	5.68	3.83	7.46	11.03	3.20	0.35	4.26	1.58	2.13	0.41	3.20	1.81
16:45:00	7.10	14.62	9.59	43.07	2.13	0.63	3.20	2.36	1.78	0.83	5.33	3.41
17:00:00	10.30	18.23	12.78	56.12	3.55	0.57	4.26	2.26	3.20	0.83	4.26	3.25
17:15:00	6.04	4.46	7.46	14.34	3.20	0.36	4.26	1.65	3.55	0.38	4.26	1.61
Average	**7.28**	**10.29**	**9.45**	**31.14**	**3.02**	**0.48**	**4.00**	**1.96**	**2.66**	**0.61**	**4.26**	**2.52**
Time	A5 FROM GAERWEN				A55 WESTBOUND OFF-SLIP				W/B RBT TO E/B RBT			
	Observed	Modelled	Observed	Modelled	Observed	Modelled	Observed	Modelled	Observed	Modelled	Observed	Modelled

	Mean Queue	Mean Queue	Max	95th %ile	Mean Queue	Mean Queue	Max	95th %ile	Mean Queue	Mean Queue	Max	95th %ile
16:30:00	3.91	0.31	5.33	1.59	3.55	1.22	4.26	4.82	2.00	0.49	3.00	3.00
16:45:00	4.62	0.93	6.39	3.75	7.46	4.21	11.72	13.71	3.33	0.78	6.00	3.00
17:00:00	5.33	0.93	6.39	3.61	7.46	4.47	9.59	15.37	0.67	0.85	2.00	3.00
17:15:00	2.84	0.42	3.20	1.85	4.97	1.17	6.39	4.60	1.00	0.52	3.00	3.00
Average	**4.17**	**0.65**	**5.33**	**2.70**	**5.86**	**2.77**	**7.97**	**9.63**	**1.75**	**0.66**	**3.50**	**3.00**

Comments:
The model validates to a high degree within the AM peak period with the exception of the A5114 from Llangefni where a maximum queue of 12 was observed. The Junctions 8 model predicts a 95th %ile queue of 8 PCUs. However, on-site observations noted that queueing was short lived and did not involve significant delays. Periods were observed during the AM peak hour where no queueing took place. As a result, this is not considered to invalidate the model. In the PM peak hour, the A55 Westbound Offlsip and A5114 arms are validated well with the model. During on site observation the queues were, again, short-lived and there were frequent periods noted on all arms except for the A5114 where no queueing took place. Where the queues are not fully validated, the queueing observed was low (a maximum queue of 7 PCU on the A5 from Gaerwen). Whilst, the ARCADY predicted average and 95th %ile queues are lower than those observed, given the low instance of queueing at these locations it is considered that the model accurately reflects the sensitivities of the junction so that the impact of the development traffic can be considered in a robust way.

13 Junction Ref 16 & 17: A55 Junction 7

Time	A55 WBOFF				A55 EBOFF				A5152 TURNING RIGHT			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	1.07	0.00	3.20	1.00
08:15:00	1.78	0.00	3.20	1.00	1.07	0.00	3.20	1.00	0.00	0.00	0.00	1.00
08:30:00	0.71	0.00	2.13	1.00	0.71	0.00	2.13	1.00	0.00	0.00	0.00	1.00
08:45:00	2.13	0.00	3.20	1.00	0.00	0.00	0.00	1.00	1.07	0.00	3.20	1.00
Average	**1.15**	**0.00**	**2.13**	**1.00**	**0.44**	**0.00**	**1.33**	**1.00**	**0.53**	**0.00**	**1.60**	**1.00**
Time	A55 WBOFF				A55 EBOFF				A5152 TURNING RIGHT			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:15:00	1.07	0.00	3.20	1.00	0.00	0.00	0.00	1.00	1.07	0.00	3.20	1.00
16:30:00	0.00	0.00	0.00	1.00	0.71	0.00	2.13	1.00	0.00	0.00	0.00	1.00
16:45:00	0.71	0.00	2.13	1.00	0.71	0.00	2.13	1.00	0.00	0.00	0.00	1.00
17:00:00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	1.78	0.00	5.33	1.00
Average	**0.44**	**0.00**	**1.33**	**1.00**	**0.36**	**0.00**	**1.07**	**1.00**	**0.71**	**0.00**	**2.13**	**1.00**

Comments:
Generally, observed queues are very low at this location. Maximum values from observed data represents short lived stacking of vehicles on approaches. The model is considered to represent the typical operation of the junctions.

14 Junction Ref 18: A5152 / A5

Time	A5 FROM GAERWEN				A5 FROM LLANFAIR				A5152			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	0.00	0.32	0.00	1.00	0.00	0.09	0.00	1.00	1.78	0.21	3.20	1.00
08:15:00	0.00	0.32	0.00	1.00	0.00	0.09	0.00	1.00	1.07	0.21	3.20	1.00
08:30:00	0.00	0.24	0.00	1.00	0.00	0.07	0.00	1.00	0.71	0.17	2.13	1.00
08:45:00	0.00	0.20	0.00	1.00	0.00	0.06	0.00	1.00	1.42	0.13	2.13	1.00
Average	**0.00**	**0.27**	**0.00**	**1.00**	**0.00**	**0.08**	**0.00**	**1.00**	**1.24**	**0.18**	**2.67**	**1.00**
Time	A5 FROM GAERWEN				A5 FROM LLANFAIR				A5152			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:15:00	0.00	0.24	0.00	1.00	0.00	0.07	0.00	1.00	0.71	0.17	2.13	1.00
16:30:00	0.00	0.32	0.00	1.00	0.00	0.09	0.00	1.00	0.71	0.21	2.13	1.00
16:45:00	0.71	0.32	2.13	1.00	1.42	0.09	2.13	1.00	0.00	0.21	0.00	1.00
17:00:00	0.00	0.24	0.00	1.00	0.00	0.07	0.00	1.00	0.00	0.17	0.00	1.00
Average	**0.18**	**0.28**	**0.53**	**1.00**	**0.36**	**0.08**	**0.53**	**1.00**	**0.36**	**0.19**	**1.07**	**1.00**

Comments:
Generally, observed queues are very low at this location. Maximum values from observed data represents short lived stacking of vehicles on approaches. The model is considered to represent the typical operation of the junctions.

15 Junction Ref 19: A5 / NCR8 Llandaniel & Junction Ref 20: A5 / Star Overbridge

Comments:
Queue data is not available for these junctions. However the model outputs reflect the queueing profile observed over repeated site observations in the AM and PM peak. The queue lengths predicted by Junctions 8 are therefore considered to be representative of the existing operation of the junction and therefore can be used as a tool to estimate the future queueing, delay, and residual capacity at the junctions.

16 Junction Ref 21 & 22: A55 Junction 7A /A5/ Pont

Time	A55 WBOFF				A5 TURNING RIGHT TO PRL				LON PONT RONWY			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	1.42	0.10	2.13	1.00	0.00	0.01	0.00	1.00	0.00	0.03	0.00	1.00
08:15:00	0.00	0.11	0.00	1.00	0.00	0.02	0.00	1.00	0.00	0.03	0.00	1.00
08:30:00	0.00	0.11	0.00	1.00	0.00	0.02	0.00	1.00	0.00	0.03	0.00	1.00
08:45:00	1.42	0.08	2.13	1.00	0.00	0.01	0.00	1.00	0.00	0.03	0.00	1.00
Average	**0.71**	**0.10**	**1.07**	**1.00**	**0.00**	**0.02**	**0.00**	**1.00**	**0.00**	**0.03**	**0.00**	**1.00**
Time	A55 WBOFF				A5 TURNING RIGHT TO PRL				LON PONT RONWY			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:15:00	0.00	0.10	0.00	1.00	0.00	0.02	0.00	1.00	0.00	0.04	0.00	1.00
16:30:00	0.71	0.13	2.13	1.00	0.00	0.02	0.00	1.00	0.00	0.04	0.00	1.00
16:45:00	1.42	0.14	2.13	1.00	0.00	0.02	0.00	1.00	0.00	0.04	0.00	1.00
17:00:00	0.71	0.11	2.13	1.00	0.00	0.02	0.00	1.00	0.00	0.04	0.00	1.00
Average	**0.71**	**0.12**	**1.60**	**1.00**	**0.00**	**0.02**	**0.00**	**1.00**	**0.00**	**0.04**	**0.00**	**1.00**

Comments:
Generally, observed queues are very low at this location. The model is considered to represent the typical operation of the junctions well.

17 Junction Ref 23: A5 / A4080 Tollgate

Time	A5 FROM MENAI BRIDGE				A4080			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	0.00	0.00	0.00	1.00	6.75	0.98	9.59	1.00
08:15:00	0.00	0.00	0.00	1.00	6.04	1.74	6.39	6.00
08:30:00	0.00	0.00	0.00	1.00	7.46	1.80	10.65	5.00
08:45:00	0.00	0.00	0.00	1.00	6.04	1.05	8.52	3.00
Average	**0.00**	**0.00**	**0.00**	**1.00**	**6.57**	**1.39**	**8.79**	**3.75**
Time	A5 FROM LLANFAIR				LON Y GRAIG			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	0.00	0.12	0.00	1.00	1.42	0.15	2.13	1.00
08:15:00	1.42	0.17	4.26	1.00	0.71	0.22	2.13	1.00
08:30:00	0.00	0.17	0.00	1.00	2.13	0.22	3.20	1.00
08:45:00	0.00	0.12	0.00	1.00	2.84	0.15	3.20	1.00
Average	**0.36**	**0.15**	**1.15**	**1.00**	**1.78**	**0.19**	**2.69**	**1.00**

Time	A5 FROM MENAI BRIDGE				A4080			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:30:00	0.00	0.00	0.00	1.00	4.26	0.97	5.33	2.00
16:45:00	0.00	0.00	0.00	1.00	3.55	1.74	4.26	6.00
17:00:00	0.00	0.00	0.00	1.00	3.91	1.80	5.33	5.00
17:15:00	0.00	0.00	0.00	1.00	3.55	1.05	5.33	3.00
Average	**0.00**	**0.00**	**0.00**	**1.00**	**3.82**	**1.39**	**5.06**	**4.00**
Time	**A5 FROM LLANFAIR**				**LON Y GRAIG**			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:30:00	0.00	0.03	0.00	1.00	0.00	0.15	0.00	2.00
16:45:00	3.91	0.05	6.39	1.00	0.71	0.21	2.13	2.00
17:00:00	0.00	0.05	0.00	1.00	0.00	0.21	0.00	2.00
17:15:00	1.07	0.03	3.20	1.00	0.00	0.15	0.00	2.00
Average	**1.24**	**0.04**	**2.40**	**1.00**	**0.18**	**0.18**	**0.53**	**2.00**

Comments:
Generally, observed queues were low along the A5 and Lon y Graig. The Junctions 8 model reflects the operation of these arms well. However, the A4080 experiences extended queueing during the AM peak hour. In the PM peak, queueing was also observed however not to the same extent as in the morning peak. Initially, the modelling did not reflect the actual queueing on the minor arm (A4080). This is likely due to the fact that Junctions 8 does not account for the gradient at the junction nor the parked vehicles and short spikes in traffic associated with a nearby school which were observed to prevent the egress of vehicles from the minor arm. This, coupled with the restricted visibility in both directions contributes to the higher level of queueing observed on site that could not be captured by the model. As a result, entry capacity was reduced within the Junctions 8 model at the A4080 to better reflect on site queue lengths.

18 Junction Ref 24 & 25: A55 Junction 8

Time	A55 E/B OFF				A55 W/B ON			
	Average	Junctions 8 Average	Max	Junctions 8 95th %ile	Average	Junctions 8 Average	Max	Junctions 8 95th %ile
08:00:00	0.71	1.12	2.13	2.00	3.91	0.58	5.33	1.00
08:15:00	0.71	1.70	2.13	2.00	3.91	0.89	4.26	2.00
08:30:00	0.00	1.72	0.00	2.00	4.97	0.90	6.39	3.00
08:45:00	1.42	1.05	2.13	2.00	3.20	0.60	4.26	1.00
Average	**0.71**	**1.40**	**1.60**	**2.00**	**3.99**	**0.74**	**5.06**	**1.75**
Time	LON PAN TURNING RIGHT TO E/B ON				A5025 RIGHT TURN TO W/B ON			
	Average	Junctions 8 Average	Max	Junctions 8 95th %ile	Average	Junctions 8 Average	Max	Junctions 8 95th %ile
08:00:00	0.36	0.05	1.07	1.00	1.07	0.44	3.20	1.00
08:15:00	0.00	0.06	0.00	1.00	2.49	0.64	5.33	1.00
08:30:00	0.00	0.06	0.00	1.00	3.20	0.65	5.33	1.00
08:45:00	0.71	0.05	2.13	1.00	1.78	0.45	3.20	1.00
Average	**0.27**	**0.06**	**0.80**	**1.00**	**2.13**	**0.55**	**4.27**	**1.00**

Time	A55 E/B OFF				A55 W/B ON			
	Average	Junctions 8 Average	Max	Junctions 8 95th %ile	Average	Junctions 8 Average	Max	Junctions 8 95th %ile
16:45:00	0.00	1.12	0.00	2.00	7.10	1.64	8.52	4.00
17:00:00	0.00	1.70	0.00	2.00	8.17	3.45	10.65	12.00
17:15:00	0.00	1.72	0.00	2.00	5.33	3.68	6.39	11.00
17:30:00	0.00	1.15	0.00	2.00	7.81	1.81	8.52	5.00
Average	**0.00**	**1.42**	**0.00**	**2.00**	**7.10**	**2.65**	**8.52**	**8.00**
Time	LON PAN TURNING RIGHT TO E/B ON				A5025 RIGHT TURN TO W/B ON			
	Average	Junctions 8 Average	Max	Junctions 8 95th %ile	Average	Junctions 8 Average	Max	Junctions 8 95th %ile
16:45:00	0.71	0.05	2.13	1.00	2.49	0.73	3.20	2.00
17:00:00	2.49	0.06	3.20	1.00	1.78	1.11	3.20	2.00
17:15:00	0.00	0.06	0.00	1.00	2.13	1.13	3.20	2.00
17:30:00	1.07	0.05	2.13	1.00	1.42	0.76	3.20	2.00
Average	**1.07**	**0.06**	**1.87**	**1.00**	**1.95**	**0.93**	**3.20**	**2.00**

Comments:
Whilst queueing throughout the junction was observed to be low throughout the AM and PM peak hours extended periods of queueing were recorded at the A55 westbound on-slip entry and the right turn from the A5025 to the westbound on-slip. The model was calibrated to reflect the queueing at the A55 Westbound on-slip. It can be seen from the validation table above that the model accurately represents the PM queueing. Given that these are the longest queues observed it is considered that the model, on the whole, captures the sensitivities at the junction and provides an appropriate basis for future year and with development assessments.

19 Junction Ref 26: A5025 / B5420 Four Crosses

Time	B5420 FROM LLANGEFNI				A5025 FROM BENLLECH			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	2.49	0.20	4.26	1.00	5.33	2.19	8.52	7.00
08:15:00	1.78	0.28	3.20	1.00	10.65	6.66	23.43	26.00
08:30:00	1.78	0.28	3.20	1.00	10.65	7.52	18.11	29.00
08:45:00	2.13	0.20	3.20	1.00	3.91	2.41	8.52	8.00
Average	**2.04**	**0.24**	**3.47**	**1.00**	**7.63**	**4.70**	**14.65**	**17.50**
Time	PENTRAETH ROAD				A5025 FROM A55 J8			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	1.78	0.53	3.20	1.00	2.13	1.02	3.20	2.00
08:15:00	3.20	0.79	3.20	1.00	3.91	1.70	4.26	4.00
08:30:00	4.26	0.80	6.39	1.00	3.55	1.72	5.33	4.00
08:45:00	3.91	0.55	5.33	1.00	2.49	1.05	4.26	2.00
Average	**3.28**	**0.67**	**4.51**	**1.00**	**3.02**	**1.37**	**4.26**	**3.00**

Time	B5420 FROM LLANGEFNI				A5025 FROM BENLLECH			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:30:00	2.49	0.14	3.20	1.00	0.71	0.50	1.07	1.00
16:45:00	0.00	0.21	0.00	1.00	0.00	0.73	0.00	1.00
17:00:00	0.71	0.21	1.07	1.00	2.84	0.73	6.39	1.00
17:15:00	1.78	0.14	2.13	1.00	1.78	0.51	3.20	1.00
Average	**1.24**	**0.18**	**2.60**	**1.00**	**1.33**	**0.62**	**2.67**	**1.00**
Time	PENTRAETH ROAD				A5025 FROM A55 J8			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:30:00	3.55	1.49	4.26	4.00	3.20	1.32	4.26	3.00
16:45:00	0.00	3.01	0.00	9.00	0.00	2.61	0.00	7.00
17:00:00	3.55	3.10	6.39	5.00	5.68	2.69	9.59	4.00
17:15:00	4.62	1.56	7.46	5.00	2.84	1.39	4.26	4.00
Average	**2.93**	**2.29**	**4.53**	**5.75**	**2.93**	**2.00**	**4.53**	**4.50**
Comments:								

A satisfactory level of model validation has been achieved for all arms within this location. Whilst the AM model does not entirely reflect the observed queues on the Pentraeth Road entry arm, a satisfactory level of validation is achieved in the PM peak, where higher maximum queues were recorded. Conversely, the A5025 from Benllech was validated to a high degree in the AM peak where long queues were recorded, despite only a satisfactory degree of validation in the PM peak hour.

20 Junction Ref 27 & 28: A55 Junction 8A

Comments:
Validation exercise relating to Junction 8A covered in a standalone Technical Note annexed to this Transport Assessment.

21 Junction Ref 29 & 30: A55 Junction 9

Time	A487 FELIN				A55 EBOFF			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	4.26	1.48	6.39	4.00	6.04	2.28	8.52	8.00
08:15:00	5.68	2.87	7.46	7.00	9.59	7.15	12.78	28.00
08:30:00	5.33	2.94	6.39	8.00	15.62	7.91	18.11	29.00
08:45:00	6.04	1.55	8.52	4.00	10.65	2.45	13.85	8.00
Average	**5.33**	**2.21**	**7.19**	**5.75**	**10.47**	**4.95**	**13.32**	**18.25**
Time	A487 BANGOR				TARFARN NEWYDD			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	4.97	1.18	7.46	2.00	6.75	1.26	8.52	3.00
08:15:00	4.62	2.70	5.33	9.00	8.17	2.86	11.72	10.00
08:30:00	4.97	2.89	5.33	8.00	5.33	3.05	7.46	8.00
08:45:00	4.62	1.29	6.39	4.00	8.17	1.37	10.65	4.00
Average	**4.79**	**2.02**	**6.13**	**5.75**	**7.10**	**2.14**	**9.59**	**6.25**

Time	A487 FELIN				A55 EBOFF			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:30:00	3.91	1.22	5.33	3.00	4.26	0.76	5.33	1.00
16:45:00	4.26	2.18	5.33	3.00	7.10	1.22	11.72	3.00
17:00:00	4.62	2.23	6.39	4.00	6.75	1.22	7.46	3.00
17:15:00	5.33	1.30	6.39	3.00	10.30	0.79	11.72	1.00
Average	**4.53**	**1.73**	**5.86**	**3.52**	**7.10**	**1.00**	**9.06**	**2.00**
Time	A487 BANGOR				TARFARN NEWYDD			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:30:00	1.78	0.93	2.13	1.00	5.33	3.02	6.39	10.00
16:45:00	3.55	1.72	4.26	3.00	6.04	14.42	7.46	42.00
17:00:00	3.91	1.76	5.33	3.00	5.68	21.34	6.39	65.00
17:15:00	4.62	0.98	5.33	2.00	9.94	3.79	11.72	14.00
Average	**3.46**	**1.35**	**4.26**	**2.25**	**6.75**	**10.64**	**7.99**	**32.75**

Comments:
The Treborth (Eastbound) roundabout at J9 of the A55 experiences significant queueing, particularly on the A55 Eastbound Offslip. Following site observations it Is believed that this is a result of significant blocking back along Tarfarn Newydd from its junction with Penrhos Road. The Junctions 8 model was validated for the AM peak hour on the Eastbound Offlsip however the queueing was not as well reflected in the PM peak. Notwithstanding that, the model has been validated for the most onerous conditions and it is therefore considered that the model generally reflects observed conditions. On this basis it is considered that it is appropriate for the assessment of Proposed Development traffic.

22 Junction Ref 29 & 30: A55 Junction 9

Time	A487 FELIN				A487 BANGOR			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	8.88	2.34	15.98	8.00	5.33	1.92	6.39	6.00
08:15:00	17.04	8.03	21.30	32.00	4.97	4.40	6.39	15.00
08:30:00	15.98	9.05	19.17	35.00	5.33	4.50	6.39	9.00
08:45:00	16.33	2.52	19.17	9.00	3.91	2.02	4.26	6.00
Average	**14.56**	**5.49**	**18.91**	**21.00**	**4.88**	**3.21**	**5.86**	**9.00**
Time	W/B OFF				PARC MENAI			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	3.20	1.53	4.26	4.00	1.07	0.22	3.20	1.00
08:15:00	5.68	3.27	7.46	11.00	1.42	0.32	2.13	1.00
08:30:00	7.81	3.43	10.65	8.00	0.71	0.32	2.13	1.00
08:45:00	4.26	1.64	5.33	5.00	0.71	0.23	2.13	1.00
Average	**5.24**	**2.47**	**6.93**	**7.00**	**0.98**	**0.27**	**2.40**	**1.00**

Time	A487 FELIN				A487 BANGOR			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:30:00	5.33	0.62	6.39	1.00	3.91	1.42	6.39	4.00
16:45:00	10.65	0.92	22.37	1.00	2.13	2.61	4.26	4.00
17:00:00	3.55	0.92	7.46	1.00	4.26	2.66	4.26	4.00
17:15:00	6.04	0.63	6.39	1.00	2.84	1.47	3.20	4.00
Average	**6.39**	**0.77**	**10.65**	**1.00**	**3.28**	**2.04**	**4.53**	**4.00**
Time	W/B OFF				PARC MENAI			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:30:00	1.07	0.36	3.20	1.00	6.04	1.99	7.46	6.00
16:45:00	2.84	0.52	4.26	1.00	5.33	6.50	10.65	25.00
17:00:00	3.91	0.53	5.33	1.00	19.53	7.44	21.30	29.00
17:15:00	1.78	0.37	3.20	1.00	11.36	2.19	15.98	7.00
Average	**2.40**	**0.45**	**3.99**	**1.00**	**10.56**	**4.53**	**13.85**	**16.75**

Comments:
The model could be validated for all arms in the AM and PM peak with the exception of the A487 Felin arm in the PM peak hour. The significant queueing experienced on this arm was well reflected in the AM peak. However, in the PM peak, the Junctions 8 average and 95th %ile queues are not of a similar magnitude to the surveyed queue lengths. From on-site observations, the observed queueing is considered to be a result of blocking back stemming from the westbound merge with the A55 at the Britannia Bridge. The ARCADY model does not consider blocking back and therefore the A487 Felin arm cannot be validated.

23 Junction Ref 31: B4547 Nant Y Garth

Time	B4547 FROM FELINHELI				B4547 NANT Y GARTH			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	0.00	0.03	0.00	1.00	4.97	3.35	6.39	10.00
08:15:00	0.00	0.03	0.00	1.00	7.81	12.87	9.59	34.00
08:30:00	0.00	0.03	0.00	1.00	9.59	17.37	12.78	52.00
08:45:00	0.00	0.03	0.00	1.00	8.17	4.60	10.65	17.00
Average	**0.00**	**0.03**	**0.00**	**1.00**	**7.63**	**9.55**	**9.85**	**28.25**
Time	B4547 FROM FELINHELI				B4547 NANT Y GARTH			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:45:00	0.00	0.03	0.00	1.00	4.62	0.70	6.39	1.00
17:00:00	0.00	0.03	0.00	1.00	4.26	1.05	5.33	2.00
17:15:00	0.00	0.03	0.00	1.00	4.62	1.08	6.39	2.00
17:30:00	0.00	0.03	0.00	1.00	4.62	0.72	5.33	1.00
Average	**0.00**	**0.03**	**0.00**	**1.00**	**4.53**	**0.89**	**5.86**	**1.50**

Comments:
The Junctions 8 model was calibrated to reflect the significant queueing observed in the AM peak hour. The model was validated against the observed queues. Whilst the PM queueing is only reflected to a satisfactory degree, the junction is considered to be operating well within its theoretical capacity at these times. Furthermore, the AM peak experiences significantly higher queuing and delay and this has been captured by the model. Consequently, the model is considered to be a suitable tool to consider the future year and with development scenarios.

24 Junction Ref 32: A4244 / B4547 / B4366 Pentir

Time	A4244 FROM LLANBERIS				B4366			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	4.97	0.93	6.39	3.90	9.23	2.72	13.85	8.70
08:15:00	4.62	1.94	6.39	7.46	6.75	9.02	9.59	23.55
08:30:00	3.91	1.92	6.39	7.78	4.26	9.02	12.38	34.55
08:45:00	3.91	0.81	4.26	3.64	3.55	4.33	4.33	17.55
Average	**4.35**	**1.40**	**5.86**	**5.65**	**5.95**	**6.27**	**7.61**	**21.09**
Time	B4547				A4244 FROM PENTIR			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	2.49	0.07	3.20	1.00	1.07	0.32	3.20	1.55
08:15:00	2.84	0.15	5.33	1.00	2.13	0.38	6.39	2.01
08:30:00	0.71	0.09	2.13	1.00	0.71	0.46	2.13	1.91
08:45:00	2.13	0.07	2.13	1.00	2.13	0.30	4.26	1.36
Average	**2.04**	**0.10**	**3.20**	**1.00**	**1.51**	**0.37**	**4.00**	**1.71**

Time	A4244 FROM LLANBERIS				B4366			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:30:00	2.49	0.32	5.33	1.78	2.49	0.78	3.20	3.02
16:45:00	5.33	0.56	7.46	2.51	2.13	1.90	4.26	7.16
17:00:00	1.42	0.57	2.13	2.41	3.20	1.53	7.46	5.28
17:15:00	4.26	0.28	6.39	1.57	2.49	0.88	5.33	3.53
Average	**3.37**	**0.43**	**5.33**	**2.07**	**2.57**	**1.27**	**5.06**	**4.75**
Time	B4547				A4244 FROM PENTIR			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:30:00	1.07	0.30	3.20	1.73	0.71	0.40	2.13	1.93
16:45:00	0.00	0.52	0.00	2.35	2.84	0.49	4.26	1.73
17:00:00	2.13	0.53	3.20	2.62	3.20	0.59	3.20	2.61
17:15:00	2.49	0.22	3.20	1.16	2.13	0.30	2.13	1.37
Average	**1.42**	**0.39**	**2.40**	**1.97**	**2.22**	**0.45**	**2.93**	**1.91**

Comments:
The Junctions 8 model is considered to represent queues of a similar magnitude across all of the arms in both the AM and PM peaks. In particular, the model aligns well with the most notable queueing, from the B4366 entry arm in the AM peak. Whilst similarly accurate results were not achieved for the B4547 and A4244 arms in the AM peak, the queueing observed at these times was low. Furthermore, additional on-site observations indicate that the queueing on these arms was short lived and a consequence of peaks in arrivals of small platoons of vehicles. In summary, queueing was sporadic and modest in both the AM and PM peak periods.

25 Junction Ref 33: A5 / A4244

Time	A5 FROM BETHESDA				A5 FROM A55				A4244			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	4.26	2.01	5.33	6.72	1.42	0.14	4.26	1.00	4.62	1.46	8.52	5.38
08:15:00	7.46	5.94	9.59	17.59	2.13	0.18	4.26	1.00	10.65	8.03	15.98	25.59
08:30:00	5.33	5.90	6.39	18.51	1.07	0.18	3.20	1.00	13.49	9.16	17.04	29.43
08:45:00	5.33	1.98	6.39	5.85	0.71	0.11	2.13	1.00	19.17	1.73	23.43	6.79
Average	**5.59**	**3.96**	**6.93**	**12.17**	**1.33**	**0.15**	**3.46**	**1.00**	**11.98**	**5.10**	**16.24**	**16.80**
Time	A5 FROM BETHESDA				A5 FROM A55				A4244			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:30:00	3.55	0.55	5.33	2.37	6.75	0.46	8.52	1.90	2.84	0.34	4.26	2.12
16:45:00	2.84	0.90	3.20	3.10	3.91	0.94	5.33	3.87	3.20	0.48	4.26	1.92
17:00:00	4.97	0.89	6.39	2.80	4.97	0.77	6.39	2.84	4.26	0.76	5.33	3.40
17:15:00	2.84	0.46	4.26	1.73	4.26	0.40	6.39	1.90	4.62	0.31	7.46	1.66
Average	**3.55**	**0.70**	**4.80**	**2.50**	**4.97**	**0.64**	**6.66**	**2.63**	**3.73**	**0.47**	**5.33**	**2.28**

Comments:
The Junctions 8 model was calibrated to reflect the queueing observed in the AM peak hour. The model was validated against the observed queues. Whilst the PM queueing is only reflected to a satisfactory degree, the junction is considered to be operating within its theoretical capacity at these times and additional site observations indicated that all queues during the PM peak were sporadic, modest and short lived. Consequently, the model is considered to be an appropriate tool for assessing the future operation and traffic impacts associated with the Proposed Development.

26 Junction Ref 42: Unnamed Road 4 / B5111 Ty'n Ffrwd

Time	UNR4			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
08:00:00	1.78	0.18	3.20	1.00
08:15:00	0.71	0.24	2.13	1.00
08:30:00	1.78	0.24	3.20	1.00
08:45:00	0.71	0.18	2.13	1.00
Average	**1.24**	**0.21**	**2.67**	**1.00**
Time	**A5 FROM BETHESDA**			
	Observed Mean Queue	Modelled Mean Queue	Observed Max	Modelled 95th %ile
16:45:00	0.71	0.09	2.13	1.00
17:00:00	1.78	0.11	3.20	1.00
17:15:00	0.00	0.11	0.00	1.00
17:30:00	1.42	0.09	2.13	1.00
Average	**0.98**	**0.10**	**1.87**	**1.00**

Comments:
Very little queueing was observed at this junction in the AM and PM peak hours. The survey notes indicate that all queues were 'one-offs' during the 5 minute periods for which queues were recorded. The Junctions 8 model reflects this. It is therefore considered that the model is a suitable tool for forecasting the impact of the Proposed Development.

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nationalgrid

North Wales Connection Project

Transport Assessment – ANNEX J

Summary of Modelled Scenarios

National Grid
National Grid House
Warwick Technology Park
Gallows Hill
Warwick
CV34 6DA

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Annex J: Summary of Modelled Scenarios for Junction Ref(s) 1 - 35 & 42

Junction Ref	Junction	LHA	Base Models				Primary Assessment						Secondary Assessment				Considered Time Restriction Mitigation
			2017 Base		2023 Base		2023 Base + Development		2023 Base + Seasonality		2023 Base + Seasonality + Development		2023 Secondary Base + Development		2023 Secondary Base + Seasonality + Development		
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
1	A5025/Wylfa Access	Isle of Anglesey County Council															×
2	A5/A5025																×
3	A55 J3																×
4																	×
5	B5111/B5112 Llanerch-y-medd																×
6	A5/A4080/B5112 Treban																×
7	A55 J5																×
8																	×
9	B5111/Bachau Llanerch-y-medd																×
10	B5111/B5110																✓
11	B5110/Ffordd Cae Sel																✓
12	B5420/Ffordd Cae Sel																✓
14	A55 J6																✓
15																	✓
16	A55 J7																×
17																	×
18	A5/A5152																×
19	A5/NCR8 Llandaniel																×
20	A5/Star Overbridge																×
21	J7A/A5/Pont Ronwy Link																×
22																	×
23	A5/A4080 Tollgate																✓
24	A55 J8																✓
25																	✓
26	A5025/B5420 Four Crosses																✓
27	A55 J8A																✓
28																	✓
42	UR 4/B5111 Ty'n Ffrwd																×
29	A55 J9	Gwynedd Council															✓
30																	✓
31	B4547 Nant-y-Garth																✓
32	A4244/B4547/B4366																✓
33	A5/A4244																✓
34	A5025/Access A5A																×
35	B4547/Pentir Access F14																×

Below Theoretical Capacity <0.85 RFC	
Above Theoretical Capacity >0.85 RFC	
Scenario Not Assessed	

Annex J: Summary of Modelled Scenarios for Junction Ref(s) 36-40

Junction Ref	Junction	LHA	Primary				Secondary		Considered for Mitigation
			2029 Base		2029 Base + Development		2029 Secondary Base + Development		
			AM	PM	AM	PM	AM	PM	
36	Llangefni Link Road Junction 1	IACC							×
37	Llangefni Link Road Junction 2	IACC							×
38	Llangefni Link Road Junction 3	IACC							×
39	Llangefni Link Road Junction 4	IACC							×
40	Llangefni Link Road Junction 5	IACC							×

Below Theoretical Capacity <0.85 RFC	
Above Theoretical Capacity >0.85 RFC	
Scenario Not Assessed	

nationalgrid

North Wales Connection Project

Transport Assessment – ANNEX K

Junction Modelling Reports and Outputs

National Grid
National Grid House
Warwick Technology Park
Gallows Hill
Warwick
CV34 6DA

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Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: Wylfa_Access_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\Wylfa Access
Report generation date: 01/06/2018 14:41:29

- » (Default Analysis Set) - 2017 Base, AM
- » (Default Analysis Set) - 2017 Base, PM
- » (Default Analysis Set) - 2023 Base, AM
- » (Default Analysis Set) - 2023 Base, PM
- » (Default Analysis Set) - 2023 Base + Dev, AM
- » (Default Analysis Set) - 2023 Base + Dev, PM

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2017 Base			
Stream B-C	0.01	4.60	0.01	A
Stream B-A	0.02	5.64	0.02	A
Stream C-AB	0.31	7.10	0.22	A
Stream C-A	-	-	-	-
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 07:15 - 08:45
"D2 - 2017 Base, PM" model duration: 16:45 - 18:15
"D3 - 2023 Base, AM" model duration: 07:15 - 08:45
"D4 - 2023 Base, PM" model duration: 16:45 - 18:15
"D5 - 2023 Base + Dev, AM" model duration: 07:15 - 08:45
"D6 - 2023 Base + Dev, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.6.541 at 01/06/2018 14:41:24

File summary

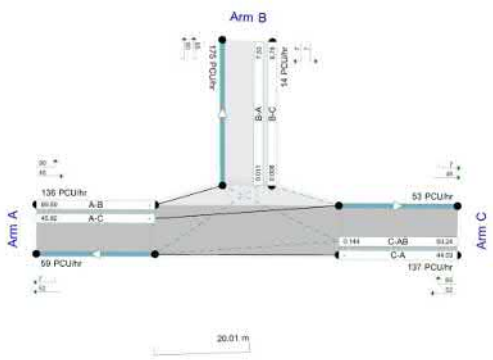
Title	(untitled)
Location	
Site Number	
Date	28/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	RogersA2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, AM	2017 Base	AM		ONE HOUR	07:15	08:45	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wylfa Access	T-Junction	Two-way	A,B,C	6.84	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5025 W		Major
B	B	Wylfa Access Rd		Minor
C	C	A5025 E		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	8.63		0.00		2.20	118.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	9.75	7.40	5.62	4.48	✓	3.00	250	250

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	755.786	0.122	0.308	0.194	0.440
1	B-C	828.871	0.113	0.284	-	-
1	C-B	642.298	0.220	0.220	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	180.00	100.000
B	ONE HOUR	✓	19.00	100.000
C	ONE HOUR	✓	183.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:15-07:30	A	135.51	135.51		
07:15-07:30	B	14.30	14.30		
07:15-07:30	C	137.77	137.77		
07:30-07:45	A	161.82	161.82		
07:30-07:45	B	17.08	17.08		
07:30-07:45	C	164.51	164.51		
07:45-08:00	A	198.18	198.18		
07:45-08:00	B	20.92	20.92		
07:45-08:00	C	201.49	201.49		
08:00-08:15	A	198.18	198.18		
08:00-08:15	B	20.92	20.92		
08:00-08:15	C	201.49	201.49		
08:15-08:30	A	161.82	161.82		
08:15-08:30	B	17.08	17.08		
08:15-08:30	C	164.51	164.51		
08:30-08:45	A	135.51	135.51		
08:30-08:45	B	14.30	14.30		
08:30-08:45	C	137.77	137.77		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	119.000	61.000
	B	10.000	0.000	9.000
	C	69.000	114.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.66	0.34
	B	0.53	0.00	0.47
	C	0.38	0.62	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	4.60	0.01	A
B-A	0.02	5.64	0.02	A
C-AB	0.22	7.10	0.31	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:15-07:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	6.78	6.74	0.00	803.51	0.008	0.01	4.518	A
B-A	7.53	7.48	0.00	682.87	0.011	0.01	5.330	A
C-AB	93.24	92.52	0.00	646.68	0.144	0.18	6.488	A
C-A	44.53	44.53	0.00	-	-	-	-	-
A-B	89.59	89.59	0.00	-	-	-	-	-
A-C	45.92	45.92	0.00	-	-	-	-	-

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	8.09	8.08	0.00	798.48	0.010	0.01	4.554	A
B-A	8.99	8.98	0.00	668.45	0.013	0.01	5.458	A
C-AB	113.26	113.07	0.00	647.75	0.175	0.23	6.731	A
C-A	51.25	51.25	0.00	-	-	-	-	-
A-B	106.98	106.98	0.00	-	-	-	-	-
A-C	54.84	54.84	0.00	-	-	-	-	-

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	9.91	9.90	0.00	791.59	0.013	0.01	4.605	A
B-A	11.01	11.00	0.00	648.80	0.017	0.02	5.643	A
C-AB	141.98	141.68	0.00	649.30	0.219	0.31	7.093	A
C-A	59.50	59.50	0.00	-	-	-	-	-
A-B	131.02	131.02	0.00	-	-	-	-	-
A-C	67.16	67.16	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	9.91	9.91	0.00	791.56	0.013	0.01	4.605	A
B-A	11.01	11.01	0.00	648.70	0.017	0.02	5.644	A
C-AB	142.02	142.01	0.00	649.33	0.219	0.31	7.098	A
C-A	59.47	59.47	0.00	-	-	-	-	-
A-B	131.02	131.02	0.00	-	-	-	-	-
A-C	67.16	67.16	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	8.09	8.10	0.00	798.43	0.010	0.01	4.554	A
B-A	8.99	9.00	0.00	668.28	0.013	0.01	5.460	A
C-AB	113.31	113.61	0.00	647.81	0.175	0.23	6.744	A
C-A	51.20	51.20	0.00	-	-	-	-	-
A-B	106.98	106.98	0.00	-	-	-	-	-
A-C	54.84	54.84	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	6.78	6.78	0.00	803.41	0.008	0.01	4.520	A
B-A	7.53	7.54	0.00	682.54	0.011	0.01	5.334	A
C-AB	93.31	93.51	0.00	646.74	0.144	0.18	6.510	A
C-A	44.46	44.46	0.00	-	-	-	-	-
A-B	89.59	89.59	0.00	-	-	-	-	-
A-C	45.92	45.92	0.00	-	-	-	-	-

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, PM	2017 Base	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wylfa Access	T-Junction	Two-way	A,B,C	6.19	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5025 W		Major
B	B	Wylfa Access Rd		Minor
C	C	A5025 E		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	8.63		0.00		2.20	118.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	9.75	7.40	5.62	4.48	✓	3.00	250	250

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	746.174	0.120	0.304	0.191	0.435
1	B-C	839.647	0.114	0.288	-	-
1	C-B	642.298	0.220	0.220	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	112.00	100.000
B	ONE HOUR	✓	264.00	100.000
C	ONE HOUR	✓	80.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowinPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	A	84.32	84.32		
16:45-17:00	B	198.75	198.75		
16:45-17:00	C	60.23	60.23		
17:00-17:15	A	100.69	100.69		
17:00-17:15	B	237.33	237.33		
17:00-17:15	C	71.92	71.92		
17:15-17:30	A	123.31	123.31		
17:15-17:30	B	290.67	290.67		
17:15-17:30	C	88.08	88.08		
17:30-17:45	A	123.31	123.31		
17:30-17:45	B	290.67	290.67		
17:30-17:45	C	88.08	88.08		
17:45-18:00	A	100.69	100.69		
17:45-18:00	B	237.33	237.33		
17:45-18:00	C	71.92	71.92		
18:00-18:15	A	84.32	84.32		
18:00-18:15	B	198.75	198.75		
18:00-18:15	C	60.23	60.23		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

From	To: A	To: B	To: C
A	0.000	5.000	107.000
B	131.000	0.000	133.000
C	76.000	4.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

From	To: A	To: B	To: C
A	0.00	0.04	0.96
B	0.50	0.00	0.50
C	0.95	0.05	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

From	To: A	To: B	To: C
A	1.000	1.000	1.000
B	1.000	1.000	1.000
C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

From	To: A	To: B	To: C
A	0.0	0.0	0.0
B	0.0	0.0	0.0
C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.19	5.84	0.24	A
B-A	0.21	6.57	0.26	A
C-AB	0.01	5.47	0.01	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	100.13	99.55	0.00	787.61	0.127	0.14	5.227	A
B-A	98.62	97.98	0.00	708.94	0.139	0.16	5.886	A
C-AB	3.29	3.27	0.00	661.07	0.005	0.01	5.472	A
C-A	56.93	56.93	0.00	-	-	-	-	-
A-B	3.76	3.76	0.00	-	-	-	-	-
A-C	80.56	80.56	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	119.56	119.42	0.00	777.07	0.154	0.18	5.472	A
B-A	117.77	117.61	0.00	701.74	0.168	0.20	6.161	A
C-AB	4.00	4.00	0.00	664.83	0.006	0.01	5.447	A
C-A	67.91	67.91	0.00	-	-	-	-	-
A-B	4.49	4.49	0.00	-	-	-	-	-
A-C	96.19	96.19	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	146.44	146.21	0.00	762.64	0.192	0.24	5.839	A
B-A	144.23	143.99	0.00	691.67	0.209	0.26	6.570	A
C-AB	5.02	5.02	0.00	670.09	0.008	0.01	5.412	A
C-A	83.06	83.06	0.00	-	-	-	-	-
A-B	5.51	5.51	0.00	-	-	-	-	-
A-C	117.81	117.81	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	146.44	146.43	0.00	762.55	0.192	0.24	5.842	A
B-A	144.23	144.23	0.00	691.68	0.209	0.26	6.575	A
C-AB	5.02	5.02	0.00	670.09	0.008	0.01	5.412	A
C-A	83.06	83.06	0.00	-	-	-	-	-
A-B	5.51	5.51	0.00	-	-	-	-	-
A-C	117.81	117.81	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	119.56	119.78	0.00	776.92	0.154	0.18	5.481	A
B-A	117.77	118.00	0.00	701.77	0.168	0.20	6.168	A
C-AB	4.00	4.01	0.00	664.83	0.006	0.01	5.449	A
C-A	67.91	67.91	0.00	-	-	-	-	-
A-B	4.49	4.49	0.00	-	-	-	-	-
A-C	96.19	96.19	0.00	-	-	-	-	-

Main results: (18:00-18:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	100.13	100.28	0.00	787.28	0.127	0.15	5.240	A
B-A	98.62	98.79	0.00	709.01	0.139	0.16	5.902	A
C-AB	3.30	3.30	0.00	661.07	0.005	0.01	5.474	A
C-A	56.93	56.93	0.00	-	-	-	-	-
A-B	3.76	3.76	0.00	-	-	-	-	-
A-C	80.56	80.56	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, AM	2023 Base	AM		ONE HOUR	07:15	08:45	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wylfa Access	T-Junction	Two-way	A,B,C	6.95	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5025 W		Major
B	B	Wylfa Access Rd		Minor
C	C	A5025 E		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	8.63		0.00		2.20	118.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	9.75	7.40	5.62	4.48	✓	3.00	250	250

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	755.174	0.122	0.308	0.194	0.440
1	B-C	829.557	0.113	0.285	-	-
1	C-B	642.298	0.220	0.220	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	191.00	100.000
B	ONE HOUR	✓	21.00	100.000
C	ONE HOUR	✓	193.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:15-07:30	A	143.79	143.79		
07:15-07:30	B	15.81	15.81		
07:15-07:30	C	145.30	145.30		
07:30-07:45	A	171.71	171.71		
07:30-07:45	B	18.88	18.88		
07:30-07:45	C	173.50	173.50		
07:45-08:00	A	210.29	210.29		
07:45-08:00	B	23.12	23.12		
07:45-08:00	C	212.50	212.50		
08:00-08:15	A	210.29	210.29		
08:00-08:15	B	23.12	23.12		
08:00-08:15	C	212.50	212.50		
08:15-08:30	A	171.71	171.71		
08:15-08:30	B	18.88	18.88		
08:15-08:30	C	173.50	173.50		
08:30-08:45	A	143.79	143.79		
08:30-08:45	B	15.81	15.81		
08:30-08:45	C	145.30	145.30		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	126.000	65.000
	B	11.000	0.000	10.000
	C	73.000	120.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.66	0.34
	B	0.52	0.00	0.48
	C	0.38	0.62	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	4.62	0.01	A
B-A	0.02	5.71	0.02	A
C-AB	0.23	7.22	0.33	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:15-07:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	7.53	7.49	0.00	802.49	0.009	0.01	4.528	A
B-A	8.28	8.23	0.00	678.17	0.012	0.01	5.373	A
C-AB	98.63	97.86	0.00	646.89	0.152	0.19	6.550	A
C-A	46.67	46.67	0.00	-	-	-	-	-
A-B	94.86	94.86	0.00	-	-	-	-	-
A-C	48.94	48.94	0.00	-	-	-	-	-

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	8.99	8.98	0.00	797.12	0.011	0.01	4.567	A
B-A	9.89	9.88	0.00	662.94	0.015	0.02	5.511	A
C-AB	119.94	119.73	0.00	648.03	0.185	0.25	6.813	A
C-A	53.56	53.56	0.00	-	-	-	-	-
A-B	113.27	113.27	0.00	-	-	-	-	-
A-C	58.43	58.43	0.00	-	-	-	-	-

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	11.01	11.00	0.00	789.75	0.014	0.01	4.622	A
B-A	12.11	12.10	0.00	642.20	0.019	0.02	5.712	A
C-AB	150.57	150.23	0.00	649.68	0.232	0.33	7.206	A
C-A	61.92	61.92	0.00	-	-	-	-	-
A-B	138.73	138.73	0.00	-	-	-	-	-
A-C	71.57	71.57	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	11.01	11.01	0.00	789.72	0.014	0.01	4.622	A
B-A	12.11	12.11	0.00	642.08	0.019	0.02	5.713	A
C-AB	150.93	150.92	0.00	649.82	0.232	0.33	7.221	A
C-A	61.57	61.57	0.00	-	-	-	-	-
A-B	138.73	138.73	0.00	-	-	-	-	-
A-C	71.57	71.57	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	8.99	9.00	0.00	797.07	0.011	0.01	4.567	A
B-A	9.89	9.90	0.00	662.76	0.015	0.02	5.513	A
C-AB	119.99	120.32	0.00	648.10	0.185	0.25	6.829	A
C-A	53.51	53.51	0.00	-	-	-	-	-
A-B	113.27	113.27	0.00	-	-	-	-	-
A-C	58.43	58.43	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	7.53	7.54	0.00	802.39	0.009	0.01	4.530	A
B-A	8.28	8.29	0.00	677.82	0.012	0.01	5.378	A
C-AB	98.72	98.93	0.00	646.96	0.153	0.20	6.572	A
C-A	46.58	46.58	0.00	-	-	-	-	-
A-B	94.86	94.86	0.00	-	-	-	-	-
A-C	48.94	48.94	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, PM	2023 Base	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wylfa Access	T-Junction	Two-way	A,B,C	6.33	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5025 W		Major
B	B	Wylfa Access Rd		Minor
C	C	A5025 E		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	8.63		0.00		2.20	118.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	9.75	7.40	5.62	4.48	✓	3.00	250	250

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	746.256	0.120	0.304	0.191	0.435
1	B-C	839.554	0.114	0.288	-	-
1	C-B	642.298	0.220	0.220	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	118.00	100.000
B	ONE HOUR	✓	280.00	100.000
C	ONE HOUR	✓	85.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	A	88.84	88.84		
16:45-17:00	B	210.80	210.80		
16:45-17:00	C	63.99	63.99		
17:00-17:15	A	106.08	106.08		
17:00-17:15	B	251.71	251.71		
17:00-17:15	C	76.41	76.41		
17:15-17:30	A	129.92	129.92		
17:15-17:30	B	308.29	308.29		
17:15-17:30	C	93.59	93.59		
17:30-17:45	A	129.92	129.92		
17:30-17:45	B	308.29	308.29		
17:30-17:45	C	93.59	93.59		
17:45-18:00	A	106.08	106.08		
17:45-18:00	B	251.71	251.71		
17:45-18:00	C	76.41	76.41		
18:00-18:15	A	88.84	88.84		
18:00-18:15	B	210.80	210.80		
18:00-18:15	C	63.99	63.99		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	6.000	112.000
	B	139.000	0.000	141.000
	C	81.000	4.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.05	0.95
	B	0.50	0.00	0.50
	C	0.95	0.05	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.20	5.97	0.26	A
B-A	0.22	6.72	0.28	A
C-AB	0.01	5.46	0.01	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	106.15	105.53	0.00	784.57	0.135	0.16	5.297	A
B-A	104.65	103.96	0.00	707.06	0.148	0.17	5.963	A
C-AB	3.31	3.29	0.00	662.56	0.005	0.01	5.460	A
C-A	60.68	60.68	0.00	-	-	-	-	-
A-B	4.52	4.52	0.00	-	-	-	-	-
A-C	84.32	84.32	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	126.76	126.60	0.00	773.42	0.164	0.19	5.564	A
B-A	124.96	124.78	0.00	699.46	0.179	0.22	6.263	A
C-AB	4.03	4.03	0.00	666.63	0.006	0.01	5.432	A
C-A	72.38	72.38	0.00	-	-	-	-	-
A-B	5.39	5.39	0.00	-	-	-	-	-
A-C	100.69	100.69	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	155.24	155.00	0.00	758.11	0.205	0.26	5.966	A
B-A	153.04	152.77	0.00	688.84	0.222	0.28	6.712	A
C-AB	5.07	5.06	0.00	672.31	0.008	0.01	5.394	A
C-A	88.52	88.52	0.00	-	-	-	-	-
A-B	6.61	6.61	0.00	-	-	-	-	-
A-C	123.31	123.31	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	155.24	155.24	0.00	758.01	0.205	0.26	5.971	A
B-A	153.04	153.04	0.00	688.85	0.222	0.28	6.717	A
C-AB	5.07	5.07	0.00	672.31	0.008	0.01	5.396	A
C-A	88.52	88.52	0.00	-	-	-	-	-
A-B	6.61	6.61	0.00	-	-	-	-	-
A-C	123.31	123.31	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	126.76	126.99	0.00	773.25	0.164	0.20	5.571	A
B-A	124.96	125.22	0.00	699.49	0.179	0.22	6.270	A
C-AB	4.03	4.04	0.00	666.63	0.006	0.01	5.432	A
C-A	72.38	72.38	0.00	-	-	-	-	-
A-B	5.39	5.39	0.00	-	-	-	-	-
A-C	100.69	100.69	0.00	-	-	-	-	-

Main results: (18:00-18:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	106.15	106.31	0.00	784.23	0.135	0.16	5.311	A
B-A	104.65	104.82	0.00	707.13	0.148	0.18	5.978	A
C-AB	3.31	3.32	0.00	662.56	0.005	0.01	5.462	A
C-A	60.68	60.68	0.00	-	-	-	-	-
A-B	4.52	4.52	0.00	-	-	-	-	-
A-C	84.32	84.32	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, AM	2023 Base + Dev	AM		ONE HOUR	07:15	08:45	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wylfa Access	T-Junction	Two-way	A,B,C	6.98	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5025 W		Major
B	B	Wylfa Access Rd		Minor
C	C	A5025 E		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	8.63		0.00		2.20	118.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	9.75	7.40	5.62	4.48	✓	3.00	250	250

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	824.206	0.133	0.336	0.211	0.480
1	B-C	752.177	0.102	0.258	-	-
1	C-B	642.298	0.220	0.220	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	292.00	100.000
B	ONE HOUR	✓	122.00	100.000
C	ONE HOUR	✓	193.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:15-07:30	A	219.83	219.83		
07:15-07:30	B	91.85	91.85		
07:15-07:30	C	145.30	145.30		
07:30-07:45	A	262.50	262.50		
07:30-07:45	B	109.68	109.68		
07:30-07:45	C	173.50	173.50		
07:45-08:00	A	321.50	321.50		
07:45-08:00	B	134.32	134.32		
07:45-08:00	C	212.50	212.50		
08:00-08:15	A	321.50	321.50		
08:00-08:15	B	134.32	134.32		
08:00-08:15	C	212.50	212.50		
08:15-08:30	A	262.50	262.50		
08:15-08:30	B	109.68	109.68		
08:15-08:30	C	173.50	173.50		
08:30-08:45	A	219.83	219.83		
08:30-08:45	B	91.85	91.85		
08:30-08:45	C	145.30	145.30		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	227.000	65.000
	B	112.000	0.000	10.000
	C	73.000	120.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.78	0.22
	B	0.92	0.00	0.08
	C	0.38	0.62	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.02	5.41	0.02	A
B-A	0.18	6.40	0.22	A
C-AB	0.24	7.59	0.35	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:15-07:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	7.53	7.49	0.00	701.24	0.011	0.01	5.189	A
B-A	84.32	83.80	0.00	730.06	0.116	0.13	5.565	A
C-AB	98.87	98.07	0.00	630.64	0.157	0.20	6.750	A
C-A	46.43	46.43	0.00	-	-	-	-	-
A-B	170.90	170.90	0.00	-	-	-	-	-
A-C	48.94	48.94	0.00	-	-	-	-	-

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	8.99	8.98	0.00	690.75	0.013	0.01	5.279	A
B-A	100.69	100.55	0.00	711.42	0.142	0.16	5.891	A
C-AB	120.36	120.13	0.00	628.75	0.191	0.26	7.077	A
C-A	53.14	53.14	0.00	-	-	-	-	-
A-B	204.07	204.07	0.00	-	-	-	-	-
A-C	58.43	58.43	0.00	-	-	-	-	-

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	11.01	11.00	0.00	676.08	0.016	0.02	5.412	A
B-A	123.31	123.10	0.00	686.05	0.180	0.22	6.395	A
C-AB	151.70	151.32	0.00	626.37	0.242	0.35	7.577	A
C-A	60.80	60.80	0.00	-	-	-	-	-
A-B	249.93	249.93	0.00	-	-	-	-	-
A-C	71.57	71.57	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	11.01	11.01	0.00	676.01	0.016	0.02	5.412	A
B-A	123.31	123.31	0.00	685.90	0.180	0.22	6.398	A
C-AB	151.74	151.73	0.00	626.42	0.242	0.35	7.587	A
C-A	60.75	60.75	0.00	-	-	-	-	-
A-B	249.93	249.93	0.00	-	-	-	-	-
A-C	71.57	71.57	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	8.99	9.00	0.00	690.65	0.013	0.01	5.280	A
B-A	100.69	100.89	0.00	711.16	0.142	0.17	5.900	A
C-AB	120.42	120.79	0.00	628.83	0.192	0.26	7.092	A
C-A	53.08	53.08	0.00	-	-	-	-	-
A-B	204.07	204.07	0.00	-	-	-	-	-
A-C	58.43	58.43	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	7.53	7.54	0.00	701.05	0.011	0.01	5.192	A
B-A	84.32	84.46	0.00	729.59	0.116	0.13	5.583	A
C-AB	98.96	99.19	0.00	630.72	0.157	0.20	6.776	A
C-A	46.34	46.34	0.00	-	-	-	-	-
A-B	170.90	170.90	0.00	-	-	-	-	-
A-C	48.94	48.94	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, PM	2023 Base + Dev	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wylfa Access	T-Junction	Two-way	A,B,C	7.64	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5025 W		Major
B	B	Wylfa Access Rd		Minor
C	C	A5025 E		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	8.63		0.00		2.20	118.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	9.75	7.40	5.62	4.48	✓	3.00	250	250

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	781.091	0.126	0.318	0.200	0.455
1	B-C	800.506	0.109	0.275	-	-
1	C-B	642.298	0.220	0.220	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	219.00	100.000
B	ONE HOUR	✓	381.00	100.000
C	ONE HOUR	✓	85.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowinPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	A	164.87	164.87		
16:45-17:00	B	286.84	286.84		
16:45-17:00	C	63.99	63.99		
17:00-17:15	A	196.88	196.88		
17:00-17:15	B	342.51	342.51		
17:00-17:15	C	76.41	76.41		
17:15-17:30	A	241.12	241.12		
17:15-17:30	B	419.49	419.49		
17:15-17:30	C	93.59	93.59		
17:30-17:45	A	241.12	241.12		
17:30-17:45	B	419.49	419.49		
17:30-17:45	C	93.59	93.59		
17:45-18:00	A	196.88	196.88		
17:45-18:00	B	342.51	342.51		
17:45-18:00	C	76.41	76.41		
18:00-18:15	A	164.87	164.87		
18:00-18:15	B	286.84	286.84		
18:00-18:15	C	63.99	63.99		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

From \ To	A	B	C
A	0.000	107.000	112.000
B	240.000	0.000	141.000
C	81.000	4.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

From \ To	A	B	C
A	0.00	0.49	0.51
B	0.63	0.00	0.37
C	0.95	0.05	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

From \ To	A	B	C
A	1.000	1.000	1.000
B	1.000	1.000	1.000
C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

From \ To	A	B	C
A	0.0	0.0	0.0
B	0.0	0.0	0.0
C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.23	6.86	0.29	A
B-A	0.37	8.13	0.59	A
C-AB	0.01	5.60	0.01	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	106.15	105.47	0.00	720.68	0.147	0.17	5.846	A
B-A	180.68	179.38	0.00	730.46	0.247	0.33	6.519	A
C-AB	3.32	3.30	0.00	646.37	0.005	0.01	5.597	A
C-A	60.67	60.67	0.00	-	-	-	-	-
A-B	80.56	80.56	0.00	-	-	-	-	-
A-C	84.32	84.32	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	126.76	126.57	0.00	703.95	0.180	0.22	6.233	A
B-A	215.76	215.37	0.00	720.58	0.299	0.42	7.115	A
C-AB	4.05	4.04	0.00	647.42	0.006	0.01	5.594	A
C-A	72.37	72.37	0.00	-	-	-	-	-
A-B	96.19	96.19	0.00	-	-	-	-	-
A-C	100.69	100.69	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	155.24	154.94	0.00	679.95	0.228	0.29	6.854	A
B-A	264.24	263.58	0.00	706.72	0.374	0.59	8.111	A
C-AB	5.10	5.09	0.00	649.01	0.008	0.01	5.590	A
C-A	88.49	88.49	0.00	-	-	-	-	-
A-B	117.81	117.81	0.00	-	-	-	-	-
A-C	123.31	123.31	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	155.24	155.24	0.00	679.71	0.228	0.29	6.863	A
B-A	264.24	264.23	0.00	706.74	0.374	0.59	8.135	A
C-AB	5.10	5.10	0.00	649.01	0.008	0.01	5.592	A
C-A	88.49	88.49	0.00	-	-	-	-	-
A-B	117.81	117.81	0.00	-	-	-	-	-
A-C	123.31	123.31	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	126.76	127.05	0.00	703.59	0.180	0.22	6.246	A
B-A	215.76	216.40	0.00	720.62	0.299	0.43	7.150	A
C-AB	4.05	4.06	0.00	647.43	0.006	0.01	5.595	A
C-A	72.37	72.37	0.00	-	-	-	-	-
A-B	96.19	96.19	0.00	-	-	-	-	-
A-C	100.69	100.69	0.00	-	-	-	-	-

Main results: (18:00-18:15)

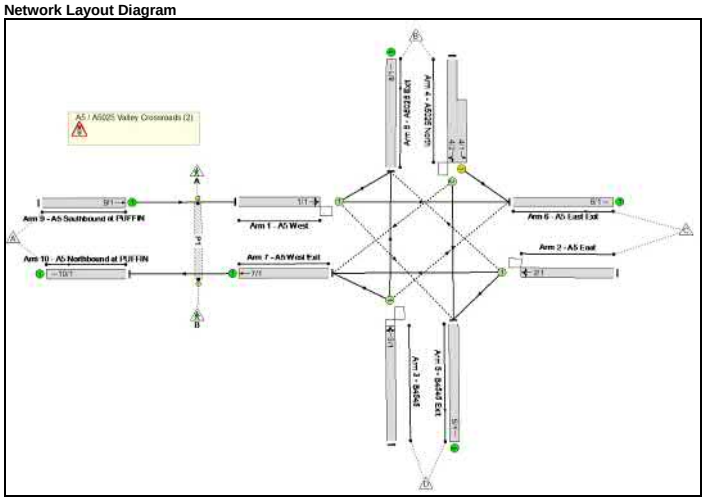
Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	106.15	106.34	0.00	720.14	0.147	0.17	5.868	A
B-A	180.68	181.09	0.00	730.51	0.247	0.33	6.556	A
C-AB	3.32	3.33	0.00	646.37	0.005	0.01	5.600	A
C-A	60.67	60.67	0.00	-	-	-	-	-
A-B	80.56	80.56	0.00	-	-	-	-	-
A-C	84.32	84.32	0.00	-	-	-	-	-

Full Input Data And Results

User and Project Details

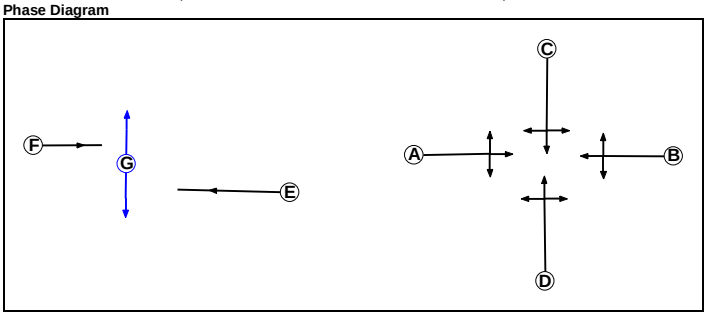
Project:	**North Wales Connection EIA**
Title:	**North Wales Connection**
Location:	
Client:	National Grid
Site Ref(s):	Valley Crossroads (Junction Ref 2)
Design Layout Ref:	A5/A5025 Cad Layout
Date Started:	06/10/2017
Checked By:	Alistair Johnson
Additional detail:	
File name:	Valley Crossroads.lsg3x
Author:	Luke Jones & Luke Peaker
Company:	AECOM
Address:	

Network Layout Diagram



Scenario 1: '2017 AM Base' (FG1: '2017 AM Base', Plan 1: 'Network Control Plan 1')

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		-9999	7
B	Traffic	1		-9999	7
C	Traffic	1		-9999	7
D	Traffic	1		-9999	7
E	Traffic	2		-9999	7
F	Traffic	2		-9999	7
G	Pedestrian	2		-9999	6

Phase Intergreens Matrix

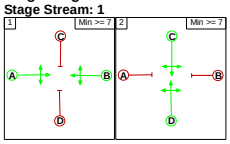
		Starting Phase						
		A	B	C	D	E	F	G
Terminating Phase	A		-	6	6	-	-	-
	B	-		6	6	-	-	-
	C	6	6		-	-	-	-
	D	6	6	-		-	-	-
	E	-	-	-	-		-	0
	F	-	-	-	-	-		0
	G	-	-	-	-	0	0	

Phases in Stage

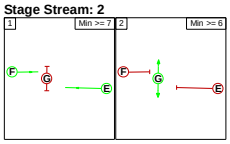
Stream	Stage No.	Phases in Stage
1	1	A B
1	2	C D
2	1	E F
2	2	G

Stage Diagram

Stage Stream: 1



Stage Stream: 2



Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

Stage Stream: 1

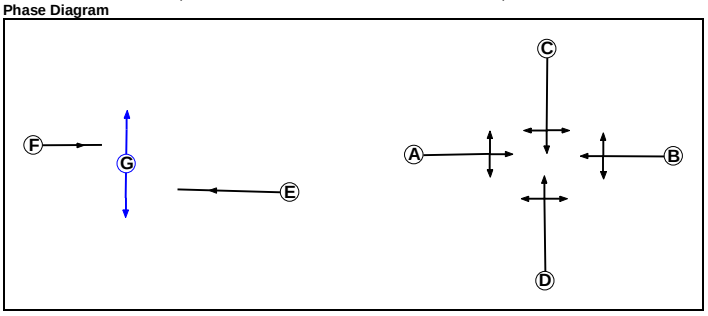
		To Stage	
		1	2
From Stage	1		6
	2	6	

Stage Stream: 2

		To Stage	
		1	2
From Stage	1		0
	2	2	

Scenario 2: '2017 PM Base' (FG2: '2017 PM Base', Plan 1: 'Network Control Plan 1')

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		-9999	7
B	Traffic	1		-9999	7
C	Traffic	1		-9999	7
D	Traffic	1		-9999	7
E	Traffic	2		-9999	7
F	Traffic	2		-9999	7
G	Pedestrian	2		-9999	6

Phase Intergreens Matrix

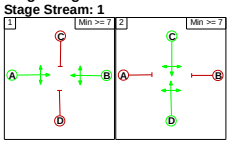
		Starting Phase						
		A	B	C	D	E	F	G
Terminating Phase	A		-	6	6	-	-	-
	B	-		6	6	-	-	-
	C	6	6		-	-	-	-
	D	6	6	-		-	-	-
	E	-	-	-	-		-	0
	F	-	-	-	-	-		0
	G	-	-	-	-	0	0	

Phases in Stage

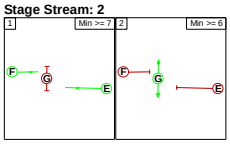
Stream	Stage No.	Phases in Stage
1	1	A B
1	2	C D
2	1	E F
2	2	G

Full Input Data And Results

Stage Diagram
Stage Stream: 1



Stage Stream: 2



Phase Delays
Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change
Stage Stream: 1

	To Stage	
From Stage	1	2
1		6
2	6	

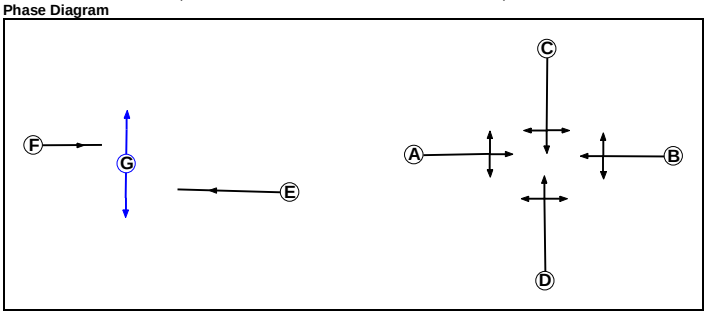
Stage Stream: 2

	To Stage	
From Stage	1	2
1		0
2	2	

Full Input Data And Results

Scenario 3: '2023 AM Base' (FG3: '2023 AM Base', Plan 1: 'Network Control Plan 1')

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		-9999	7
B	Traffic	1		-9999	7
C	Traffic	1		-9999	7
D	Traffic	1		-9999	7
E	Traffic	2		-9999	7
F	Traffic	2		-9999	7
G	Pedestrian	2		-9999	6

Phase Intergreens Matrix

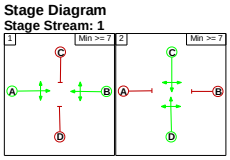
		Starting Phase						
		A	B	C	D	E	F	G
Terminating Phase	A		-	6	6	-	-	-
	B	-		6	6	-	-	-
	C	6	6		-	-	-	-
	D	6	6	-		-	-	-
	E	-	-	-	-		-	0
	F	-	-	-	-	-		0
	G	-	-	-	-	0	0	

Phases in Stage

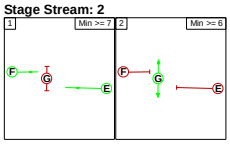
Stream	Stage No.	Phases in Stage
1	1	A B
1	2	C D
2	1	E F
2	2	G

Full Input Data And Results

Stage Diagram
Stage Stream: 1



Stage Stream: 2



Phase Delays
Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change
Stage Stream: 1

	To Stage	
From Stage	1	2
1		6
2	6	

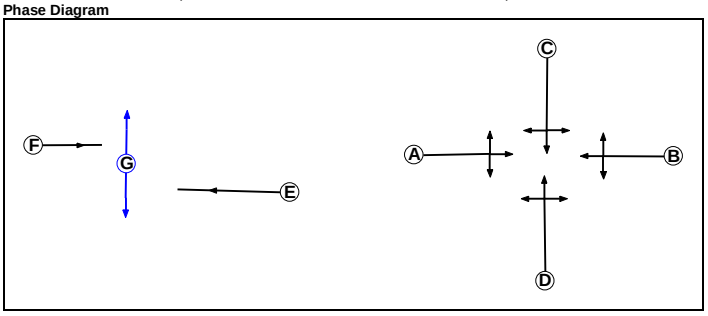
Stage Stream: 2

	To Stage	
From Stage	1	2
1		0
2	2	

Full Input Data And Results

Scenario 4: '2023 PM Base' (FG4: '2023 PM Base ', Plan 1: 'Network Control Plan 1')

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		-9999	7
B	Traffic	1		-9999	7
C	Traffic	1		-9999	7
D	Traffic	1		-9999	7
E	Traffic	2		-9999	7
F	Traffic	2		-9999	7
G	Pedestrian	2		-9999	6

Phase Intergreens Matrix

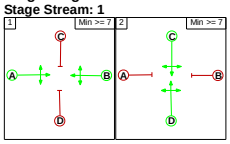
		Starting Phase						
		A	B	C	D	E	F	G
Terminating Phase	A		-	6	6	-	-	-
	B	-		6	6	-	-	-
	C	6	6		-	-	-	-
	D	6	6	-		-	-	-
	E	-	-	-	-		-	0
	F	-	-	-	-	-		0
	G	-	-	-	-	0	0	

Phases in Stage

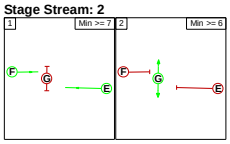
Stream	Stage No.	Phases in Stage
1	1	A B
1	2	C D
2	1	E F
2	2	G

Full Input Data And Results

Stage Diagram
Stage Stream: 1



Stage Stream: 2



Phase Delays
Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change
Stage Stream: 1

		To Stage	
		1	2
From Stage	1		6
	2	6	

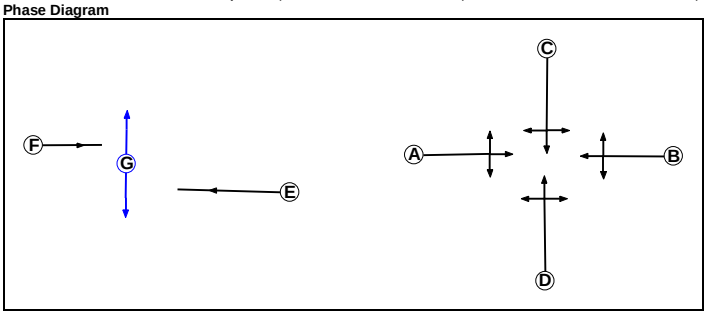
Stage Stream: 2

		To Stage	
		1	2
From Stage	1		0
	2	2	

Full Input Data And Results

Scenario 5: '2023 AM Base + Development' (FG5: '2023 AM Base + Development', Plan 1: 'Network Control Plan 1')

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		-9999	7
B	Traffic	1		-9999	7
C	Traffic	1		-9999	7
D	Traffic	1		-9999	7
E	Traffic	2		-9999	7
F	Traffic	2		-9999	7
G	Pedestrian	2		-9999	6

Phase Intergreens Matrix

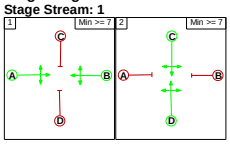
		Starting Phase						
		A	B	C	D	E	F	G
Terminating Phase	A		-	6	6	-	-	-
	B	-		6	6	-	-	-
	C	6	6		-	-	-	-
	D	6	6	-		-	-	-
	E	-	-	-	-		-	0
	F	-	-	-	-	-		0
	G	-	-	-	-	0	0	

Phases in Stage

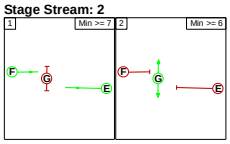
Stream	Stage No.	Phases in Stage
1	1	A B
1	2	C D
2	1	E F
2	2	G

Full Input Data And Results

Stage Diagram
Stage Stream: 1



Stage Stream: 2



Phase Delays
Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change
Stage Stream: 1

		To Stage	
		1	2
From Stage	1		6
	2	6	

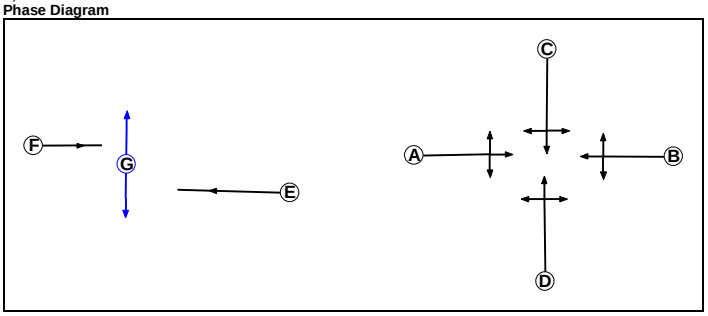
Stage Stream: 2

		To Stage	
		1	2
From Stage	1		0
	2	2	

Full Input Data And Results

Scenario 6: '2023 PM Base + Development ' (FG6: '2023 PM Base + Development', Plan 1: 'Network Control Plan 1')

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		-9999	7
B	Traffic	1		-9999	7
C	Traffic	1		-9999	7
D	Traffic	1		-9999	7
E	Traffic	2		-9999	7
F	Traffic	2		-9999	7
G	Pedestrian	2		-9999	6

Phase Intergreens Matrix

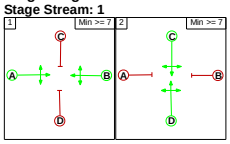
		Starting Phase						
		A	B	C	D	E	F	G
Terminating Phase	A		-	6	6	-	-	-
	B	-		6	6	-	-	-
	C	6	6		-	-	-	-
	D	6	6	-		-	-	-
	E	-	-	-	-		-	0
	F	-	-	-	-	-		0
	G	-	-	-	-	0	0	

Phases in Stage

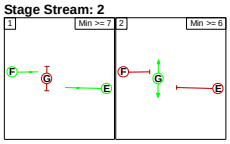
Stream	Stage No.	Phases in Stage
1	1	A B
1	2	C D
2	1	E F
2	2	G

Stage Diagram

Stage Stream: 1



Stage Stream: 2



Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

Stage Stream: 1

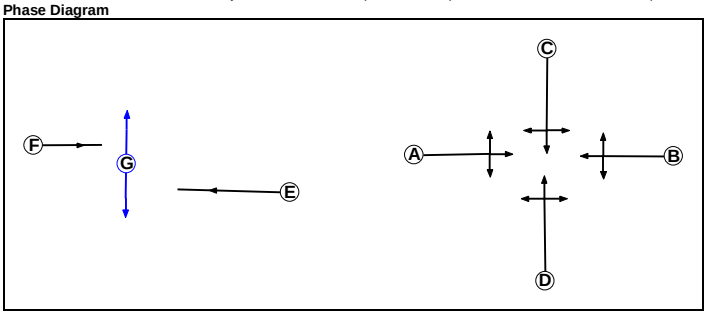
	To Stage	
From Stage	1	2
1		6
2	6	

Stage Stream: 2

	To Stage	
From Stage	1	2
1		0
2	2	

Scenario 7: '2023 AM Base + Development + Committed' (No Flow Group, Plan 1: 'Network Control Plan 1')

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		-9999	7
B	Traffic	1		-9999	7
C	Traffic	1		-9999	7
D	Traffic	1		-9999	7
E	Traffic	2		-9999	7
F	Traffic	2		-9999	7
G	Pedestrian	2		-9999	6

Phase Intergreens Matrix

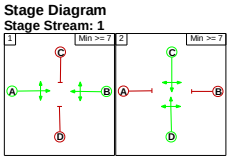
		Starting Phase						
		A	B	C	D	E	F	G
Terminating Phase	A		-	6	6	-	-	-
	B	-		6	6	-	-	-
	C	6	6		-	-	-	-
	D	6	6	-		-	-	-
	E	-	-	-	-		-	0
	F	-	-	-	-	-		0
	G	-	-	-	-	0	0	

Phases in Stage

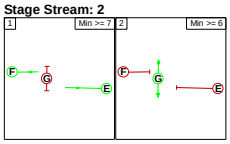
Stream	Stage No.	Phases in Stage
1	1	A B
1	2	C D
2	1	E F
2	2	G

Stage Diagram

Stage Stream: 1



Stage Stream: 2



Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

Stage Stream: 1

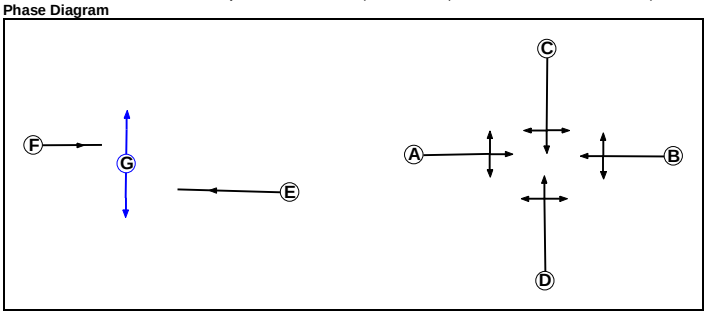
	To Stage	
From Stage	1	2
1		6
2	6	

Stage Stream: 2

	To Stage	
From Stage	1	2
1		0
2	2	

Scenario 8: '2023 PM Base + Development + Committed' (No Flow Group, Plan 1: 'Network Control Plan 1')

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		-9999	7
B	Traffic	1		-9999	7
C	Traffic	1		-9999	7
D	Traffic	1		-9999	7
E	Traffic	2		-9999	7
F	Traffic	2		-9999	7
G	Pedestrian	2		-9999	6

Phase Intergreens Matrix

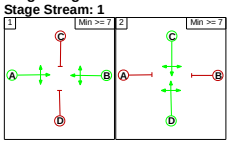
		Starting Phase						
		A	B	C	D	E	F	G
Terminating Phase	A		-	6	6	-	-	-
	B	-		6	6	-	-	-
	C	6	6		-	-	-	-
	D	6	6	-		-	-	-
	E	-	-	-	-		-	0
	F	-	-	-	-	-		0
	G	-	-	-	-	0	0	

Phases in Stage

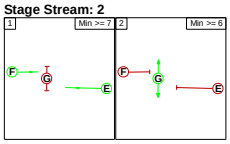
Stream	Stage No.	Phases in Stage
1	1	A B
1	2	C D
2	1	E F
2	2	G

Full Input Data And Results

Stage Diagram
Stage Stream: 1



Stage Stream: 2



Phase Delays
Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change
Stage Stream: 1

		To Stage	
		1	2
From Stage	1		6
	2	6	

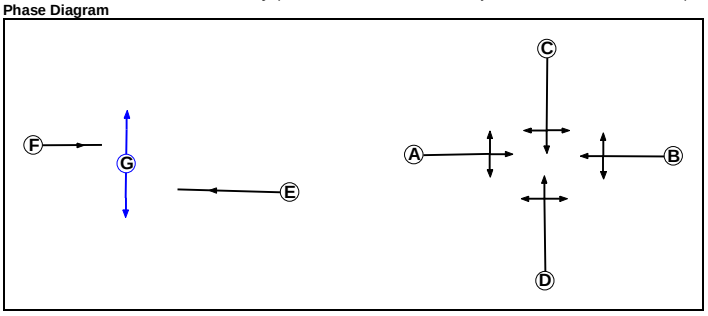
Stage Stream: 2

		To Stage	
		1	2
From Stage	1		0
	2	2	

Full Input Data And Results

Scenario 9: '2023 PM Base + Seasonality' (FG7: '2023 PM Base + Seasonality', Plan 1: 'Network Control Plan 1')

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		-9999	7
B	Traffic	1		-9999	7
C	Traffic	1		-9999	7
D	Traffic	1		-9999	7
E	Traffic	2		-9999	7
F	Traffic	2		-9999	7
G	Pedestrian	2		-9999	6

Phase Intergreens Matrix

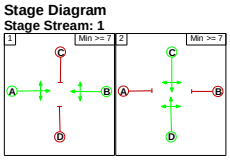
		Starting Phase						
		A	B	C	D	E	F	G
Terminating Phase	A		-	6	6	-	-	-
	B	-		6	6	-	-	-
	C	6	6		-	-	-	-
	D	6	6	-		-	-	-
	E	-	-	-	-		-	0
	F	-	-	-	-	-		0
	G	-	-	-	-	0	0	

Phases in Stage

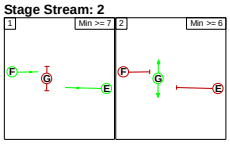
Stream	Stage No.	Phases in Stage
1	1	A B
1	2	C D
2	1	E F
2	2	G

Full Input Data And Results

Stage Diagram
Stage Stream: 1



Stage Stream: 2



Phase Delays
Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change
Stage Stream: 1

		To Stage	
		1	2
From Stage	1		6
	2	6	

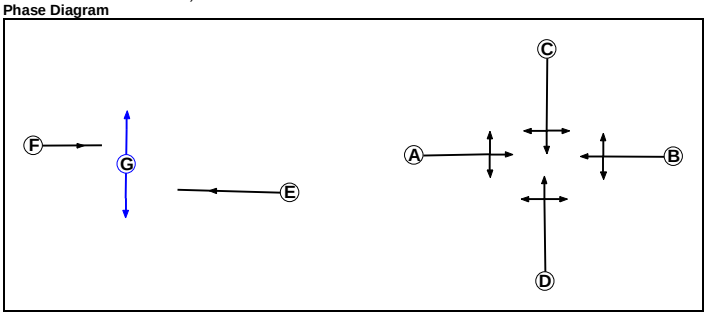
Stage Stream: 2

		To Stage	
		1	2
From Stage	1		0
	2	2	

Full Input Data And Results

Scenario 10: '2023 PM Base + Seasonality + Development ' (FG8: '2023 PM Base + Seasonality + Development', Plan 1: 'Network Control Plan 1')

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		-9999	7
B	Traffic	1		-9999	7
C	Traffic	1		-9999	7
D	Traffic	1		-9999	7
E	Traffic	2		-9999	7
F	Traffic	2		-9999	7
G	Pedestrian	2		-9999	6

Phase Intergreens Matrix

		Starting Phase						
		A	B	C	D	E	F	G
Terminating Phase	A		-	6	6	-	-	-
	B	-		6	6	-	-	-
	C	6	6		-	-	-	-
	D	6	6	-		-	-	-
	E	-	-	-	-		-	0
	F	-	-	-	-	-		0
	G	-	-	-	-	0	0	

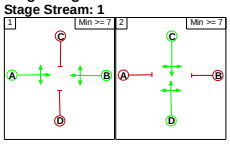
Phases in Stage

Stream	Stage No.	Phases in Stage
1	1	A B
1	2	C D
2	1	E F
2	2	G

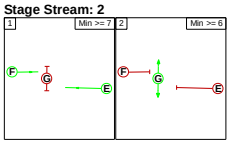
Full Input Data And Results

Stage Diagram

Stage Stream: 1



Stage Stream: 2



Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

Stage Stream: 1

		To Stage	
		1	2
From Stage	1		6
	2	6	

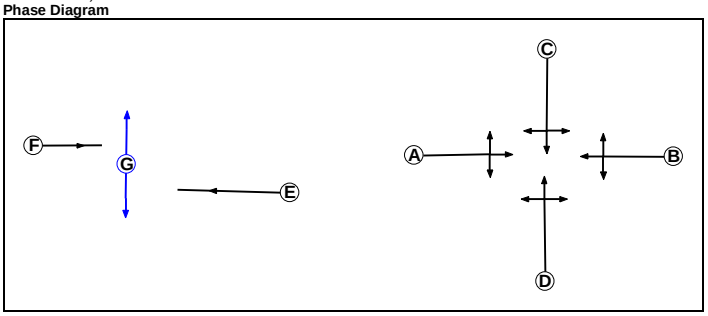
Stage Stream: 2

		To Stage	
		1	2
From Stage	1		0
	2	2	

Full Input Data And Results

Scenario 11: '2023 PM Base + Seasonlaity + Development + Committed' (No Flow Group, Plan 1: 'Network Control Plan 1')

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		-9999	7
B	Traffic	1		-9999	7
C	Traffic	1		-9999	7
D	Traffic	1		-9999	7
E	Traffic	2		-9999	7
F	Traffic	2		-9999	7
G	Pedestrian	2		-9999	6

Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G
A		-	6	6	-	-	-
B	-		6	6	-	-	-
C	6	6		-	-	-	-
D	6	6	-		-	-	-
E	-	-	-	-		-	0
F	-	-	-	-	-		0
G	-	-	-	-	0	0	

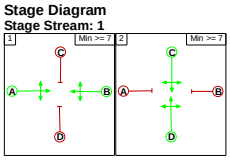
Phases in Stage

Stream	Stage No.	Phases in Stage
1	1	A B
1	2	C D
2	1	E F
2	2	G

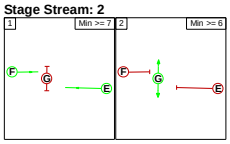
Full Input Data And Results

Stage Diagram

Stage Stream: 1



Stage Stream: 2



Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

Stage Stream: 1

		To Stage	
		1	2
From Stage	1		6
	2	6	

Stage Stream: 2

		To Stage	
		1	2
From Stage	1		0
	2	2	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A5 / A5025 Valley Crossroads (2)

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/1 (A5 West)	5/1 (Right)	1439	0	2/1	1.09	To 5/1 (Left) To 7/1 (Ahead)	2.00	2.00	0.50	2	3.00
2/1 (A5 East)	8/1 (Right)	1439	0	1/1	1.09	To 6/1 (Ahead) To 8/1 (Left)	2.00	2.00	0.50	2	3.00
3/1 (B4545)	6/1 (Right)	1439	0	4/2 4/1	1.09 1.09	To 5/1 (Ahead) All	3.00	2.00	0.50	3	3.00
4/2 (A5025 North)	7/1 (Right)	1439	0	3/1	1.09	To 7/1 (Left) To 8/1 (Ahead)	2.00	2.00	0.50	2	3.00

Lane Input Data

Junction: A5 / A5025 Valley Crossroads (2)

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A5 West)	O	A	2	3	60.0	Geom	-	3.45	0.00	Y	Arm 5 Right	8.20
											Arm 6 Ahead	Inf
											Arm 8 Left	13.86
2/1 (A5 East)	O	B	2	3	60.0	Geom	-	3.45	0.00	Y	Arm 5 Left	14.00
											Arm 7 Ahead	Inf
											Arm 8 Right	13.20
3/1 (B4545)	O	D	2	3	60.0	Geom	-	2.85	0.00	Y	Arm 6 Right	22.07
											Arm 7 Left	Inf
											Arm 8 Ahead	5.01
4/1 (A5025 North)	U	C	2	3	10.0	User	1800	-	-	-	-	-
4/2 (A5025 North)	O	C	2	3	60.0	Geom	-	3.20	0.00	N	Arm 5 Ahead	Inf
											Arm 7 Right	18.57
5/1 (B4545 Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (A5 East Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (A5 West Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1 (A5025 Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
9/1 (A5 Southbound at PUFFIN)	U		2	3	60.0	Inf	-	-	-	-	-	-
10/1 (A5 Northbound at PUFFIN)	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2017 AM Base'	08:00	09:00	01:00	
2: '2017 PM Base'	16:30	17:30	01:00	
3: '2023 AM Base'	08:00	09:00	01:00	F1*1.0598
4: '2023 PM Base '	16:30	17:30	01:00	F2*1.0553
5: '2023 AM Base + Development'	08:00	09:00	01:00	
6: '2023 PM Base + Development'	16:30	17:30	01:00	
7: '2023 PM Base + Seasonality'	16:30	17:30	01:00	F4*1.2
8: '2023 PM Base + Seasonality + Development'	16:30	17:30	01:00	F7+(F6-F4)

Scenario 1: '2017 AM Base' (FG1: '2017 AM Base', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	56	146	26	228
	B	149	0	114	48	311
	C	75	55	0	107	237
	D	33	22	128	0	183
	Tot.	257	133	388	181	959

Traffic Lane Flows

Lane	Scenario 1: 2017 AM Base
Junction: A5 / A5025 Valley Crossroads (2)	
1/1	228
2/1	237
3/1	183
4/1 (short)	114
4/2 (with short)	311(In) 197(Out)
5/1	181
6/1	388
7/1	257
8/1	133
9/1	228
10/1	257

Lane Saturation Flows

Junction: A5 / A5025 Valley Crossroads (2)

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A5 West)	3.45	0.00	Y	Arm 5 Right	8.20	11.4 %	1871	1871
				Arm 6 Ahead	Inf	64.0 %		
				Arm 8 Left	13.86	24.6 %		
2/1 (A5 East)	3.45	0.00	Y	Arm 5 Left	14.00	45.1 %	1824	1824
				Arm 7 Ahead	Inf	31.6 %		
				Arm 8 Right	13.20	23.2 %		
3/1 (B4545)	2.85	0.00	Y	Arm 6 Right	22.07	69.9 %	1754	1754
				Arm 7 Left	Inf	18.0 %		
				Arm 8 Ahead	5.01	12.0 %		
4/1 (A5025 North Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A5025 North)	3.20	0.00	N	Arm 5 Ahead	Inf	24.4 %	1956	1956
				Arm 7 Right	18.57	75.6 %		
5/1 (B4545 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A5 East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A5 West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (A5025 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (A5 Southbound at PUFFIN Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (A5 Northbound at PUFFIN Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2017 PM Base' (FG2: '2017 PM Base', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	164	98	46	308
	B	113	0	85	31	229
	C	165	84	0	126	375
	D	65	36	73	0	174
	Tot.	343	284	256	203	1086

Traffic Lane Flows

Lane	Scenario 2: 2017 PM Base
Junction: A5 / A5025 Valley Crossroads (2)	
1/1	308
2/1	375
3/1	174
4/1 (short)	85
4/2 (with short)	229(In) 144(Out)
5/1	203
6/1	256
7/1	343
8/1	284
9/1	308
10/1	343

Full Input Data And Results

Lane Saturation Flows

Junction: A5 / A5025 Valley Crossroads (2)								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A5 West)	3.45	0.00	Y	Arm 5 Right	8.20	14.9 %	1807	1807
				Arm 6 Ahead	Inf	31.8 %		
				Arm 8 Left	13.86	53.2 %		
2/1 (A5 East)	3.45	0.00	Y	Arm 5 Left	14.00	33.6 %	1847	1847
				Arm 7 Ahead	Inf	44.0 %		
				Arm 8 Right	13.20	22.4 %		
3/1 (B4545)	2.85	0.00	Y	Arm 6 Right	22.07	42.0 %	1742	1742
				Arm 7 Left	Inf	37.4 %		
				Arm 8 Ahead	5.01	20.7 %		
4/1 (A5025 North Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A5025 North)	3.20	0.00	N	Arm 5 Ahead	Inf	21.5 %	1951	1951
				Arm 7 Right	18.57	78.5 %		
5/1 (B4545 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A5 East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A5 West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (A5025 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (A5 Southbound at PUFFIN Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (A5 Northbound at PUFFIN Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2023 AM Base
Junction: A5 / A5025 Valley Crossroads (2)	
1/1	237
2/1	246
3/1	190
4/1 (short)	118
4/2 (with short)	323(In) 205(Out)
5/1	188
6/1	403
7/1	267
8/1	138
9/1	237
10/1	267

Scenario 3: '2023 AM Base' (FG3: '2023 AM Base', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	59	155	28	242
	B	158	0	121	51	330
	C	79	58	0	113	250
	D	35	23	136	0	194
	Tot.	272	140	412	192	1016

Full Input Data And Results

Lane Saturation Flows

Junction: A5 / A5025 Valley Crossroads (2)								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A5 West)	3.45	0.00	Y	Arm 5 Right	8.20	11.4 %	1871	1871
				Arm 6 Ahead	Inf	64.1 %		
				Arm 8 Left	13.86	24.5 %		
2/1 (A5 East)	3.45	0.00	Y	Arm 5 Left	14.00	45.1 %	1824	1824
				Arm 7 Ahead	Inf	31.7 %		
				Arm 8 Right	13.20	23.2 %		
3/1 (B4545)	2.85	0.00	Y	Arm 6 Right	22.07	70.0 %	1753	1753
				Arm 7 Left	Inf	17.9 %		
				Arm 8 Ahead	5.01	12.1 %		
4/1 (A5025 North Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A5025 North)	3.20	0.00	N	Arm 5 Ahead	Inf	24.4 %	1956	1956
				Arm 7 Right	18.57	75.6 %		
5/1 (B4545 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A5 East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A5 West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (A5025 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (A5 Southbound at PUFFIN Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (A5 Northbound at PUFFIN Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: 2023 PM Base
Junction: A5 / A5025 Valley Crossroads (2)	
1/1	320
2/1	389
3/1	180
4/1 (short)	88
4/2 (with short)	237(In) 149(Out)
5/1	211
6/1	266
7/1	355
8/1	294
9/1	320
10/1	355

Scenario 4: '2023 PM Base' (FG4: '2023 PM Base ', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	173	103	49	325
	B	119	0	90	33	242
	C	174	89	0	133	396
	D	69	38	77	0	184
	Tot.	362	300	270	215	1147

Full Input Data And Results

Lane Saturation Flows

Junction: A5 / A5025 Valley Crossroads (2)								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A5 West)	3.45	0.00	Y	Arm 5 Right	8.20	15.0 %	1807	1807
				Arm 6 Ahead	Inf	31.9 %		
				Arm 8 Left	13.86	53.1 %		
2/1 (A5 East)	3.45	0.00	Y	Arm 5 Left	14.00	33.7 %	1846	1846
				Arm 7 Ahead	Inf	44.0 %		
				Arm 8 Right	13.20	22.4 %		
3/1 (B4545)	2.85	0.00	Y	Arm 6 Right	22.07	42.2 %	1743	1743
				Arm 7 Left	Inf	37.2 %		
				Arm 8 Ahead	5.01	20.6 %		
4/1 (A5025 North Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A5025 North)	3.20	0.00	N	Arm 5 Ahead	Inf	21.5 %	1951	1951
				Arm 7 Right	18.57	78.5 %		
5/1 (B4545 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A5 East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A5 West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (A5025 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (A5 Southbound at PUFFIN Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (A5 Northbound at PUFFIN Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 5: 2023 AM Base + Development
Junction: A5 / A5025 Valley Crossroads (2)	
1/1	237
2/1	347
3/1	190
4/1 (short)	219
4/2 (with short)	424(In) 205(Out)
5/1	188
6/1	504
7/1	267
8/1	239
9/1	237
10/1	267

Scenario 5: '2023 AM Base + Development' (FG5: '2023 AM Base + Development', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	59	220	28	307
	B	158	0	222	51	431
	C	79	159	0	158	396
	D	35	23	166	0	224
	Tot.	272	241	608	237	1358

Full Input Data And Results

Lane Saturation Flows

Junction: A5 / A5025 Valley Crossroads (2)								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A5 West)	3.45	0.00	Y	Arm 5 Right	8.20	11.4 %	1871	1871
				Arm 6 Ahead	Inf	64.1 %		
				Arm 8 Left	13.86	24.5 %		
2/1 (A5 East)	3.45	0.00	Y	Arm 5 Left	14.00	32.0 %	1805	1805
				Arm 7 Ahead	Inf	22.5 %		
				Arm 8 Right	13.20	45.5 %		
3/1 (B4545)	2.85	0.00	Y	Arm 6 Right	22.07	70.0 %	1753	1753
				Arm 7 Left	Inf	17.9 %		
				Arm 8 Ahead	5.01	12.1 %		
4/1 (A5025 North Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A5025 North)	3.20	0.00	N	Arm 5 Ahead	Inf	24.4 %	1956	1956
				Arm 7 Right	18.57	75.6 %		
5/1 (B4545 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A5 East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A5 West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (A5025 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (A5 Southbound at PUFFIN Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (A5 Northbound at PUFFIN Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: 2023 PM Base + Development
Junction: A5 / A5025 Valley Crossroads (2)	
1/1	320
2/1	490
3/1	180
4/1 (short)	189
4/2 (with short)	338(In) 149(Out)
5/1	211
6/1	367
7/1	355
8/1	395
9/1	320
10/1	355

Scenario 6: '2023 PM Base + Development ' (FG6: '2023 PM Base + Development', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	173	262	49	484
	B	119	0	191	33	343
	C	174	190	0	195	559
	D	69	38	163	0	270
	Tot.	362	401	616	277	1656

Full Input Data And Results

Lane Saturation Flows

Junction: A5 / A5025 Valley Crossroads (2)								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A5 West)	3.45	0.00	Y	Arm 5 Right	8.20	15.0 %	1807	1807
				Arm 6 Ahead	Inf	31.9 %		
				Arm 8 Left	13.86	53.1 %		
2/1 (A5 East)	3.45	0.00	Y	Arm 5 Left	14.00	26.7 %	1828	1828
				Arm 7 Ahead	Inf	34.9 %		
				Arm 8 Right	13.20	38.4 %		
3/1 (B4545)	2.85	0.00	Y	Arm 6 Right	22.07	42.2 %	1743	1743
				Arm 7 Left	Inf	37.2 %		
				Arm 8 Ahead	5.01	20.6 %		
4/1 (A5025 North Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A5025 North)	3.20	0.00	N	Arm 5 Ahead	Inf	21.5 %	1951	1951
				Arm 7 Right	18.57	78.5 %		
5/1 (B4545 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A5 East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A5 West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (A5025 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (A5 Southbound at PUFFIN Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (A5 Northbound at PUFFIN Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 7: '2023 AM Base + Development + Committed' (No Flow Group, Plan 1: 'Network Control Plan 1')
Traffic Flows, Desired
Desired Flow : Scenario has no Flowgroup

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 7: 2023 AM Base + Development + Committed
Junction: A5 / A5025 Valley Crossroads (2)	
1/1	237
2/1	433
3/1	190
4/1 (short)	305
4/2 (with short)	510(In) 205(Out)
5/1	188
6/1	590
7/1	267
8/1	325
9/1	237
10/1	267

Full Input Data And Results

Lane Saturation Flows

Junction: A5 / A5025 Valley Crossroads (2)								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A5 West)	3.45	0.00	Y	Arm 5 Right	8.20			
				Arm 6 Ahead	Inf			
				Arm 8 Left	13.86			
2/1 (A5 East)	3.45	0.00	Y	Arm 5 Left	14.00			
				Arm 7 Ahead	Inf			
				Arm 8 Right	13.20			
3/1 (B4545)	2.85	0.00	Y	Arm 6 Right	22.07			
				Arm 7 Left	Inf			
				Arm 8 Ahead	5.01			
4/1 (A5025 North Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A5025 North)	3.20	0.00	N	Arm 5 Ahead	Inf			
				Arm 7 Right	18.57			
5/1 (B4545 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A5 East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A5 West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (A5025 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (A5 Southbound at PUFFIN Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (A5 Northbound at PUFFIN Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 8: '2023 PM Base + Development + Committed' (No Flow Group, Plan 1: 'Network Control Plan 1')
Traffic Flows, Desired
Desired Flow : Scenario has no Flowgroup

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 8: 2023 PM Base + Development + Committed
Junction: A5 / A5025 Valley Crossroads (2)	
1/1	320
2/1	576
3/1	180
4/1 (short)	275
4/2 (with short)	424(In) 149(Out)
5/1	211
6/1	453
7/1	355
8/1	481
9/1	320
10/1	355

Full Input Data And Results

Lane Saturation Flows

Junction: A5 / A5025 Valley Crossroads (2)								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A5 West)	3.45	0.00	Y	Arm 5 Right	8.20			
				Arm 6 Ahead	Inf			
				Arm 8 Left	13.86			
2/1 (A5 East)	3.45	0.00	Y	Arm 5 Left	14.00			
				Arm 7 Ahead	Inf			
				Arm 8 Right	13.20			
3/1 (B4545)	2.85	0.00	Y	Arm 6 Right	22.07			
				Arm 7 Left	Inf			
				Arm 8 Ahead	5.01			
4/1 (A5025 North Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A5025 North)	3.20	0.00	N	Arm 5 Ahead	Inf			
				Arm 7 Right	18.57			
5/1 (B4545 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A5 East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A5 West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (A5025 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (A5 Southbound at PUFFIN Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (A5 Northbound at PUFFIN Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 9: '2023 PM Base + Seasonality' (FG7: '2023 PM Base + Seasonality', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	208	124	59	391
	B	143	0	108	40	291
	C	209	107	0	160	476
	D	83	46	92	0	221
	Tot.	435	361	324	259	1379

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 9: 2023 PM Base + Seasonality
Junction: A5 / A5025 Valley Crossroads (2)	
1/1	384
2/1	466
3/1	215
4/1 (short)	106
4/2 (with short)	284(In) 178(Out)
5/1	253
6/1	319
7/1	425
8/1	352
9/1	384
10/1	425

Full Input Data And Results

Lane Saturation Flows

Junction: A5 / A5025 Valley Crossroads (2)								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A5 West)	3.45	0.00	Y	Arm 5 Right	8.20	15.1 %	1806	1806
				Arm 6 Ahead	Inf	31.8 %		
				Arm 8 Left	13.86	53.1 %		
2/1 (A5 East)	3.45	0.00	Y	Arm 5 Left	14.00	33.7 %	1847	1847
				Arm 7 Ahead	Inf	44.0 %		
				Arm 8 Right	13.20	22.3 %		
3/1 (B4545)	2.85	0.00	Y	Arm 6 Right	22.07	42.3 %	1743	1743
				Arm 7 Left	Inf	37.2 %		
				Arm 8 Ahead	5.01	20.5 %		
4/1 (A5025 North Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A5025 North)	3.20	0.00	N	Arm 5 Ahead	Inf	21.3 %	1951	1951
				Arm 7 Right	18.57	78.7 %		
5/1 (B4545 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A5 East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A5 West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (A5025 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (A5 Southbound at PUFFIN Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (A5 Northbound at PUFFIN Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 10: '2023 PM Base + Seasonality + Development ' (FG8: '2023 PM Base + Seasonality + Development', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	208	283	59	550
	B	143	0	209	40	392
	C	209	208	0	222	639
	D	83	46	178	0	307
	Tot.	435	462	670	321	1888

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 10: 2023 PM Base + Seasonality + Development
Junction: A5 / A5025 Valley Crossroads (2)	
1/1	384
2/1	567
3/1	215
4/1 (short)	207
4/2 (with short)	385(In) 178(Out)
5/1	253
6/1	420
7/1	425
8/1	453
9/1	384
10/1	425

Full Input Data And Results

Lane Saturation Flows

Junction: A5 / A5025 Valley Crossroads (2)

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A5 West)	3.45	0.00	Y	Arm 5 Right	8.20	15.1 %	1806	1806
				Arm 6 Ahead	Inf	31.8 %		
				Arm 8 Left	13.86	53.1 %		
2/1 (A5 East)	3.45	0.00	Y	Arm 5 Left	14.00	27.7 %	1830	1830
				Arm 7 Ahead	Inf	36.2 %		
				Arm 8 Right	13.20	36.2 %		
3/1 (B4545)	2.85	0.00	Y	Arm 6 Right	22.07	42.3 %	1743	1743
				Arm 7 Left	Inf	37.2 %		
				Arm 8 Ahead	5.01	20.5 %		
4/1 (A5025 North Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A5025 North)	3.20	0.00	N	Arm 5 Ahead	Inf	21.3 %	1951	1951
				Arm 7 Right	18.57	78.7 %		
5/1 (B4545 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A5 East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A5 West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (A5025 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (A5 Southbound at PUFFIN Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (A5 Northbound at PUFFIN Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 11: '2023 PM Base + Seasonlaity + Development + Committed' (No Flow Group, Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow : Scenario has no Flowgroup

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 11: 2023 PM Base + Seasonlaity + Development + Committed
Junction: A5 / A5025 Valley Crossroads (2)	
1/1	384
2/1	653
3/1	215
4/1 (short)	293
4/2 (with short)	471(In) 178(Out)
5/1	253
6/1	506
7/1	425
8/1	539
9/1	384
10/1	425

Full Input Data And Results

Lane Saturation Flows

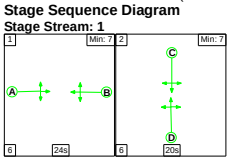
Junction: A5 / A5025 Valley Crossroads (2)

Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
1/1 (A5 West)	3.45	0.00	Y	Arm 5 Right	8.20			
				Arm 6 Ahead	Inf			
				Arm 8 Left	13.86			
2/1 (A5 East)	3.45	0.00	Y	Arm 5 Left	14.00			
				Arm 7 Ahead	Inf			
				Arm 8 Right	13.20			
3/1 (B4545)	2.85	0.00	Y	Arm 6 Right	22.07			
				Arm 7 Left	Inf			
				Arm 8 Ahead	5.01			
4/1 (A5025 North Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
4/2 (A5025 North)	3.20	0.00	N	Arm 5 Ahead	Inf			
				Arm 7 Right	18.57			
5/1 (B4545 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
6/1 (A5 East Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
7/1 (A5 West Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1 (A5025 Exit Lane 1)	Infinite Saturation Flow						Inf	Inf
9/1 (A5 Southbound at PUFFIN Lane 1)	Infinite Saturation Flow						Inf	Inf
10/1 (A5 Northbound at PUFFIN Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2017 AM Base' (FG1: '2017 AM Base', Plan 1: 'Network Control Plan 1')

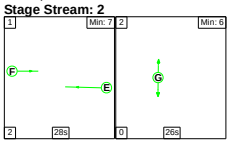
Stage Sequence Diagram

Stage Stream: 1



Full Input Data And Results

Stage Stream: 2



Stage Timings

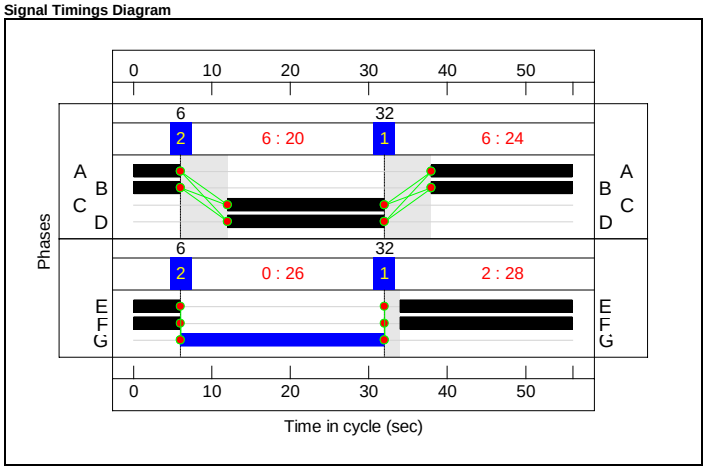
Stage Stream: 1

Stage	1	2
Duration	24	20
Change Point	32	6

Stage Stream: 2

Stage	1	2
Duration	28	26
Change Point	32	6

Signal Timings Diagram



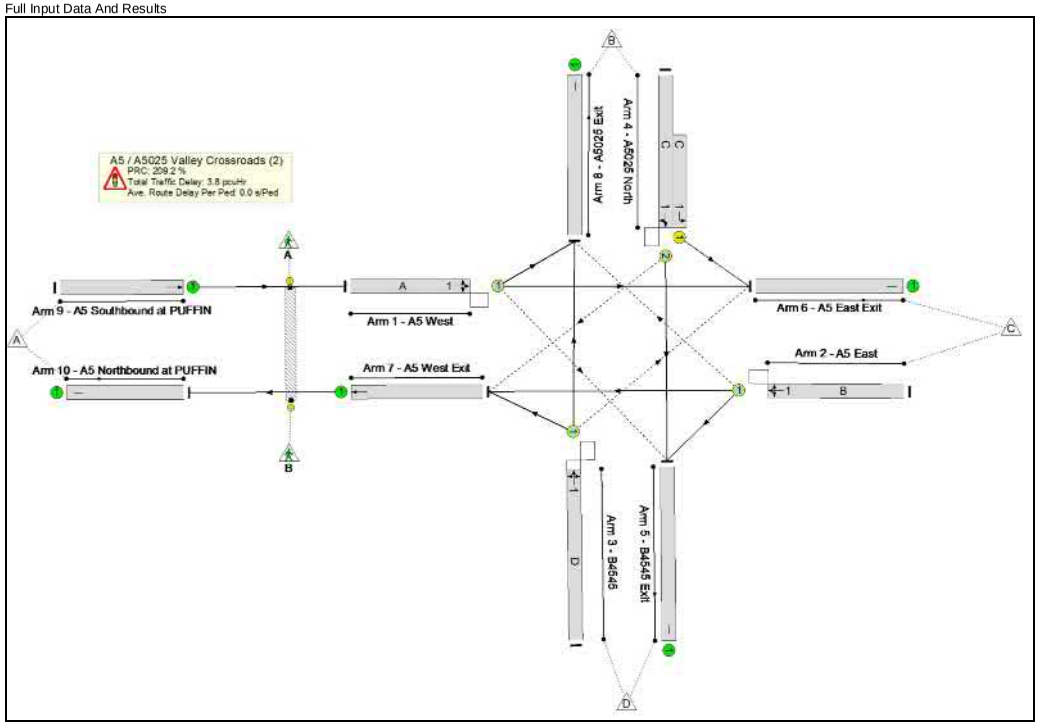
Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: North Wales Connection	-	-	**N/A**	-	-		-	-	-	-	-	-	**29.1%**
A5 / A5025 Valley Crossroads (2)	-	-	**N/A**	-	-		-	-	-	-	-	-	**29.1%**
1/1	A5 West Right Ahead Left	O	1	N/A	A		1	24	-	228	1871	835	27.3%
2/1	A5 East Left Ahead Right	O	1	N/A	B		1	24	-	237	1824	814	29.1%
3/1	B4545 Right Left Ahead	O	1	N/A	D		1	20	-	183	1754	658	27.8%
4/2+4/1	A5025 North Ahead Left Right	O+U	1	N/A	C		1	20	-	311	1956:1800	707+409	27.9 : 27.9%
5/1	B4545 Exit	U	N/A	N/A	-		-	-	-	181	Inf	Inf	0.0%
6/1	A5 East Exit	U	N/A	N/A	-		-	-	-	388	Inf	Inf	0.0%
7/1	A5 West Exit Ahead	U	N/A	N/A	-		-	-	-	257	Inf	Inf	0.0%
8/1	A5025 Exit	U	N/A	N/A	-		-	-	-	133	Inf	Inf	0.0%
9/1	A5 Southbound at PUFFIN Ahead	U	N/A	N/A	-		-	-	-	228	Inf	Inf	0.0%
10/1	A5 Northbound at PUFFIN	U	N/A	N/A	-		-	-	-	257	Inf	Inf	0.0%
Ped Link: P1	Puffin Crossing	-	2	-	G		1	26	-	0	-	33429	0.0%

Network Layout Diagram

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: North Wales Connection	-	-	**356**	**0**	**2**	**2.9**	**0.8**	**0.1**	**3.8**	-	-	-	-
A5 / A5025 Valley Crossroads (2)	-	-	**356**	**0**	**2**	**2.9**	**0.8**	**0.1**	**3.8**	-	-	-	-
1/1	228	228	26	0	0	0.6	0.2	0.0	0.8	13.0	2.2	0.2	2.4
2/1	237	237	55	0	0	0.7	0.2	0.0	0.9	13.4	2.3	0.2	2.5
3/1	183	183	126	0	2	0.6	0.2	0.1	0.9	17.1	2.0	0.2	2.2
4/2+4/1	311	311	149	0	0	1.0	0.2	0.0	1.3	14.5	2.1	0.2	2.3
5/1	181	181	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	388	388	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	257	257	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	133	133	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	228	228	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	257	257	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0

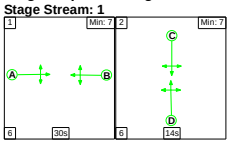
C1 - A5 / A5025 Valley Crossroads	Stream: 1 PRC for Signalled Lanes (%):	209.2	Total Delay for Signalled Lanes (pcuHr):	3.83	Cycle Time (s): 56
C1 - A5 / A5025 Valley Crossroads	Stream: 2 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s): 56
	PRC Over All Lanes (%):	209.2	Total Delay Over All Lanes(pcuHr):	3.83	



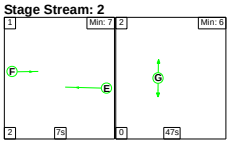
Scenario 2: '2017 PM Base' (FG2: '2017 PM Base', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

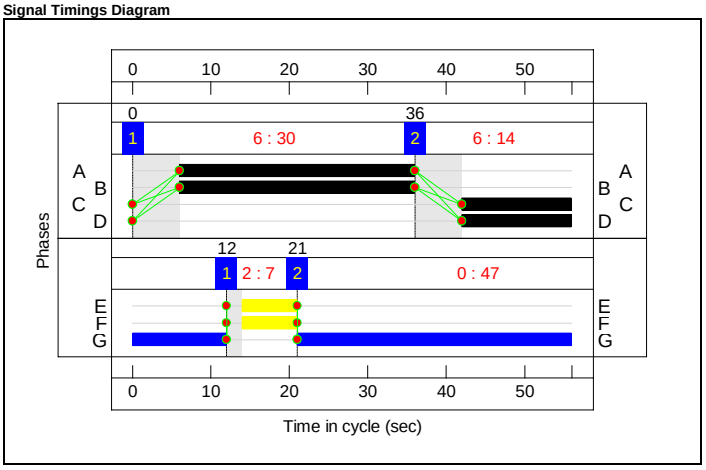
Stage Stream: 1

Stage	1	2
Duration	30	14
Change Point	0	36

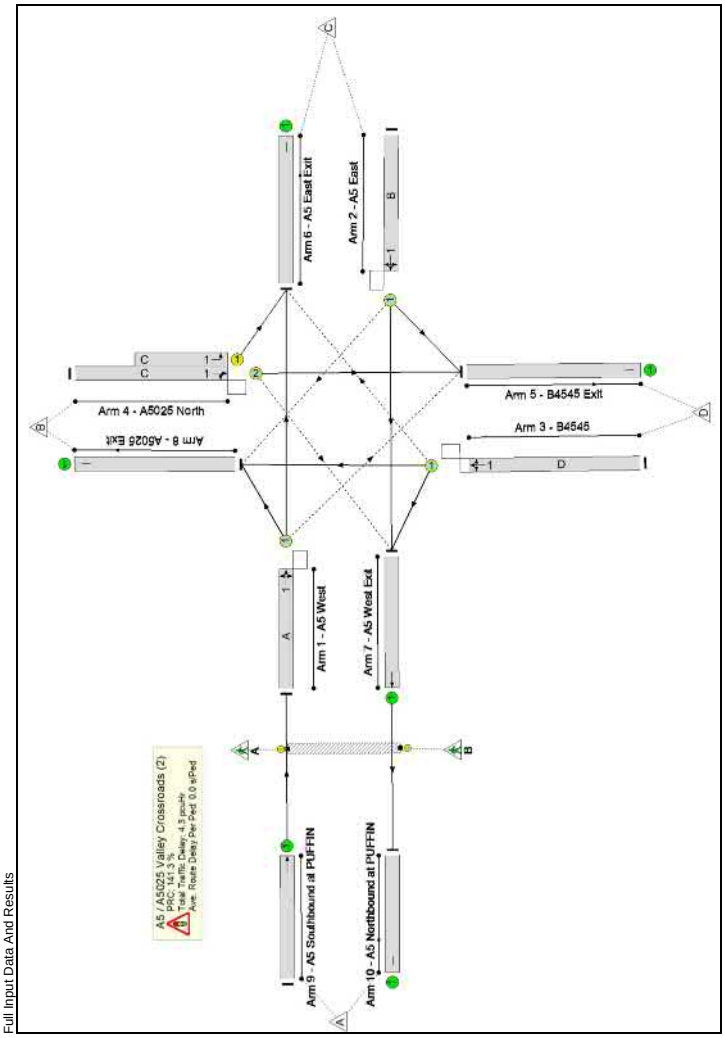
Stage Stream: 2

Stage	1	2
Duration	7	47
Change Point	12	21

Signal Timings Diagram



Network Layout Diagram



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: North Wales Connection	-	-	**N/A**	-	-		-	-	-	-	-	-	**37.3%**
A5 / A5025 Valley Crossroads (2)	-	-	**N/A**	-	-		-	-	-	-	-	-	**37.3%**
1/1	A5 West Right Ahead Left	O	1	N/A	A		1	30	-	308	1807	1000	30.8%
2/1	A5 East Left Ahead Right	O	1	N/A	B		1	30	-	375	1847	1022	36.7%
3/1	B4545 Right Left Ahead	O	1	N/A	D		1	14	-	174	1742	467	37.3%
4/2+4/1	A5025 North Ahead Left Right	O+U	1	N/A	C		1	14	-	229	1951:1800	450+266	32.0 : 32.0%
5/1	B4545 Exit	U	N/A	N/A	-		-	-	-	203	Inf	Inf	0.0%
6/1	A5 East Exit	U	N/A	N/A	-		-	-	-	256	Inf	Inf	0.0%
7/1	A5 West Exit Ahead	U	N/A	N/A	-		-	-	-	343	Inf	Inf	0.0%
8/1	A5025 Exit	U	N/A	N/A	-		-	-	-	284	Inf	Inf	0.0%
9/1	A5 Southbound at PUFFIN Ahead	U	N/A	N/A	-		-	-	-	308	Inf	Inf	0.0%
10/1	A5 Northbound at PUFFIN	U	N/A	N/A	-		-	-	-	343	Inf	Inf	0.0%
Ped Link: P1	Puffin Crossing	-	2	-	G		1	47	-	0	-	60429	0.0%

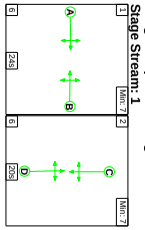
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: North Wales Connection	-	-	**315**	**0**	**1**	**3.1**	**1.0**	**0.1**	**4.3**	-	-	-	-
A5 / A5025 Valley Crossroads (2)	-	-	**315**	**0**	**1**	**3.1**	**1.0**	**0.1**	**4.3**	-	-	-	-
1/1	308	308	46	0	0	0.6	0.2	0.0	0.8	9.7	2.6	0.2	2.8
2/1	375	375	84	0	0	0.7	0.3	0.0	1.1	10.2	3.2	0.3	3.5
3/1	174	174	72	0	1	0.8	0.3	0.0	1.1	23.0	2.2	0.3	2.5
4/2+4/1	229	229	113	0	0	1.0	0.2	0.1	1.3	20.6	1.8	0.2	2.0
5/1	203	203	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	256	256	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	343	343	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	284	284	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	308	308	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	343	343	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0

C1 - A5 / A5025 Valley Crossroads	Stream: 1 PRC for Signalled Lanes (%):	141.3	Total Delay for Signalled Lanes (pcuHr):	4.31	Cycle Time (s): 56
C1 - A5 / A5025 Valley Crossroads	Stream: 2 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s): 56
	PRC Over All Lanes (%):	141.3	Total Delay Over All Lanes(pcuHr):	4.31	

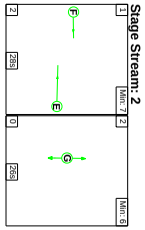
Scenario 3: '2023 AM Base' (FG3: '2023 AM Base', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

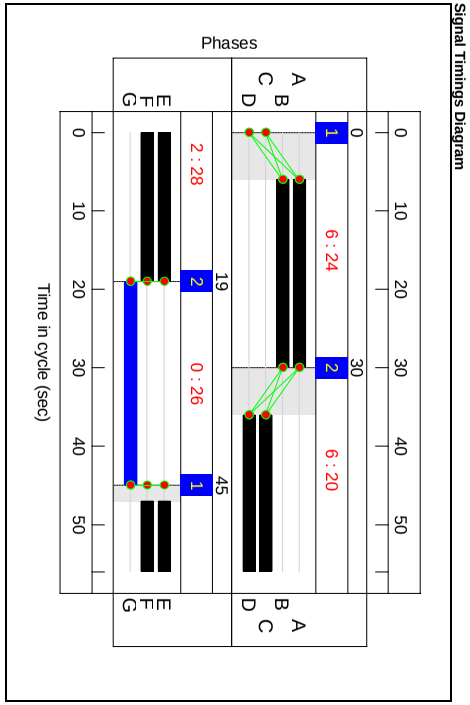
Stage Stream: 1

Stage	1	2
Duration	24	20
Change Point	0	30

Stage Stream: 2

Stage	1	2
Duration	28	26
Change Point	45	19

Signal Timings Diagram



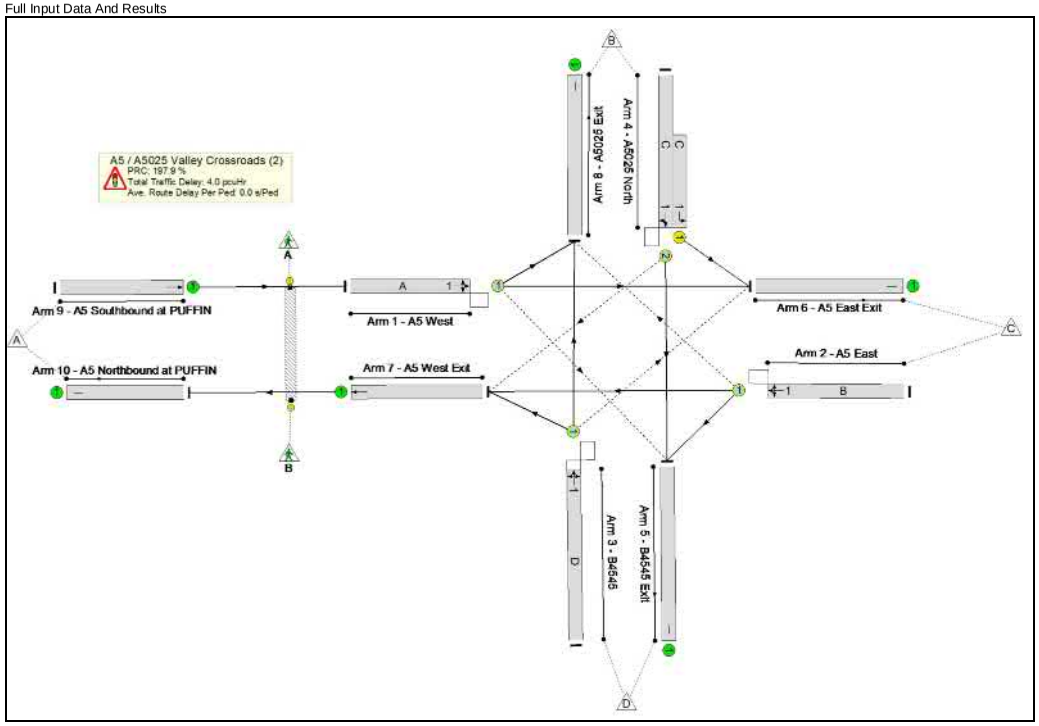
Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: North Wales Connection	-	-	**N/A**	-	-		-	-	-	-	-	-	**30.2%**
A5 / A5025 Valley Crossroads (2)	-	-	**N/A**	-	-		-	-	-	-	-	-	**30.2%**
1/1	A5 West Right Ahead Left	O	1	N/A	A		1	24	-	237	1871	835	28.4%
2/1	A5 East Left Ahead Right	O	1	N/A	B		1	24	-	246	1824	814	30.2%
3/1	B4545 Right Left Ahead	O	1	N/A	D		1	20	-	190	1753	643	29.6%
4/2+4/1	A5025 North Ahead Left Right	O+U	1	N/A	C		1	20	-	323	1956:1800	707+407	29.0 : 29.0%
5/1	B4545 Exit	U	N/A	N/A	-		-	-	-	188	Inf	Inf	0.0%
6/1	A5 East Exit	U	N/A	N/A	-		-	-	-	403	Inf	Inf	0.0%
7/1	A5 West Exit Ahead	U	N/A	N/A	-		-	-	-	267	Inf	Inf	0.0%
8/1	A5025 Exit	U	N/A	N/A	-		-	-	-	138	Inf	Inf	0.0%
9/1	A5 Southbound at PUFFIN Ahead	U	N/A	N/A	-		-	-	-	237	Inf	Inf	0.0%
10/1	A5 Northbound at PUFFIN	U	N/A	N/A	-		-	-	-	267	Inf	Inf	0.0%
Ped Link: P1	Puffin Crossing	-	2	-	G		1	26	-	0	-	33429	0.0%

Network Layout Diagram

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: North Wales Connection	-	-	**370**	**0**	**2**	**3.1**	**0.8**	**0.1**	**4.0**	-	-	-	-
A5 / A5025 Valley Crossroads (2)	-	-	**370**	**0**	**2**	**3.1**	**0.8**	**0.1**	**4.0**	-	-	-	-
1/1	237	237	27	0	0	0.6	0.2	0.0	0.9	13.1	2.3	0.2	2.5
2/1	246	246	57	0	0	0.7	0.2	0.0	0.9	13.5	2.4	0.2	2.6
3/1	190	190	131	0	2	0.6	0.2	0.1	0.9	17.5	2.1	0.2	2.3
4/2+4/1	323	323	155	0	0	1.1	0.2	0.0	1.3	14.6	2.2	0.2	2.4
5/1	188	188	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	403	403	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	267	267	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	138	138	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	237	237	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	267	267	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0

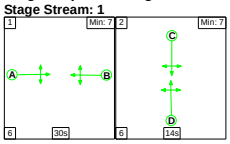
C1 - A5 / A5025 Valley Crossroads Stream: 1 PRC for Signalled Lanes (%): 197.9 Total Delay for Signalled Lanes (pcuHr): 4.02 Cycle Time (s): 56
C1 - A5 / A5025 Valley Crossroads Stream: 2 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 0.00 Cycle Time (s): 56
PRC Over All Lanes (%): 197.9 Total Delay Over All Lanes(pcuHr): 4.02



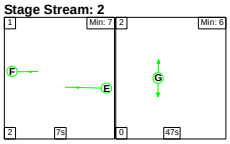
Scenario 4: '2023 PM Base' (FG4: '2023 PM Base ', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

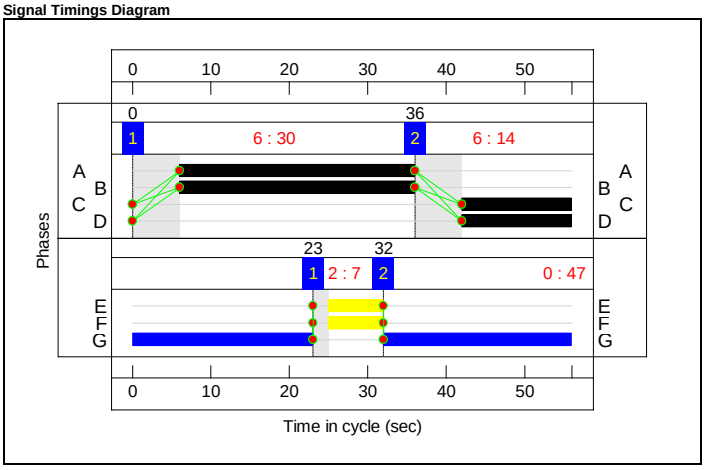
Stage Stream: 1

Stage	1	2
Duration	30	14
Change Point	0	36

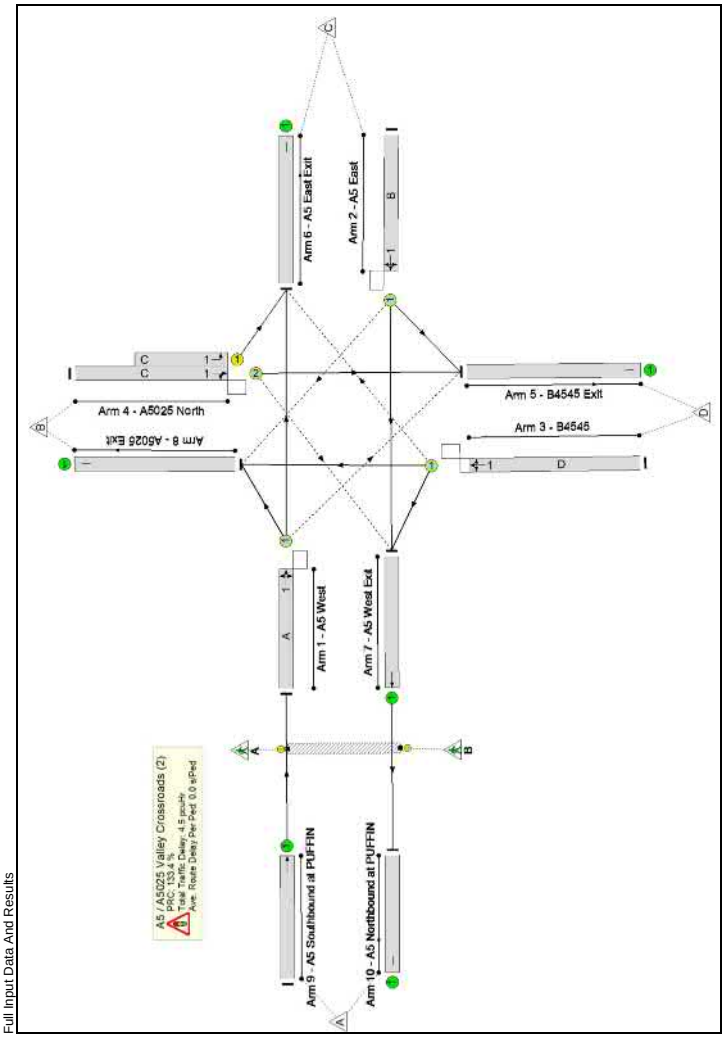
Stage Stream: 2

Stage	1	2
Duration	7	47
Change Point	23	32

Signal Timings Diagram



Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: North Wales Connection	-	-	**N/A**	-	-		-	-	-	-	-	-	**38.6%**
A5 / A5025 Valley Crossroads (2)	-	-	**N/A**	-	-		-	-	-	-	-	-	**38.6%**
1/1	A5 West Right Ahead Left	O	1	N/A	A		1	30	-	320	1807	1000	32.0%
2/1	A5 East Left Ahead Right	O	1	N/A	B		1	30	-	389	1846	1022	38.1%
3/1	B4545 Right Left Ahead	O	1	N/A	D		1	14	-	180	1743	467	38.6%
4/2+4/1	A5025 North Ahead Left Right	O+U	1	N/A	C		1	14	-	237	1951:1800	446+263	33.4 : 33.4%
5/1	B4545 Exit	U	N/A	N/A	-		-	-	-	211	Inf	Inf	0.0%
6/1	A5 East Exit	U	N/A	N/A	-		-	-	-	266	Inf	Inf	0.0%
7/1	A5 West Exit Ahead	U	N/A	N/A	-		-	-	-	355	Inf	Inf	0.0%
8/1	A5025 Exit	U	N/A	N/A	-		-	-	-	294	Inf	Inf	0.0%
9/1	A5 Southbound at PUFFIN Ahead	U	N/A	N/A	-		-	-	-	320	Inf	Inf	0.0%
10/1	A5 Northbound at PUFFIN	U	N/A	N/A	-		-	-	-	355	Inf	Inf	0.0%
Ped Link: P1	Puffin Crossing	-	2	-	G		1	47	-	0	-	60429	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: North Wales Connection	-	-	**327**	**0**	**1**	**3.3**	**1.1**	**0.2**	**4.5**	-	-	-	-
A5 / A5025 Valley Crossroads (2)	-	-	**327**	**0**	**1**	**3.3**	**1.1**	**0.2**	**4.5**	-	-	-	-
1/1	320	320	48	0	0	0.6	0.2	0.0	0.9	9.8	2.7	0.2	2.9
2/1	389	389	87	0	0	0.8	0.3	0.0	1.1	10.3	3.3	0.3	3.7
3/1	180	180	75	0	1	0.8	0.3	0.0	1.2	23.2	2.2	0.3	2.6
4/2+4/1	237	237	117	0	0	1.1	0.3	0.1	1.4	20.8	1.8	0.3	2.1
5/1	211	211	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	266	266	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	355	355	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	294	294	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	320	320	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	355	355	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0

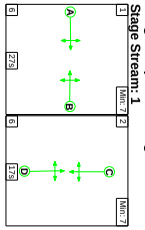
C1 - A5 / A5025 Valley Crossroads	Stream: 1 PRC for Signalled Lanes (%):	133.4	Total Delay for Signalled Lanes (pcuHr):	4.52	Cycle Time (s):	56
C1 - A5 / A5025 Valley Crossroads	Stream: 2 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	56
	PRC Over All Lanes (%):	133.4	Total Delay Over All Lanes(pcuHr):	4.52		

Full Input Data And Results

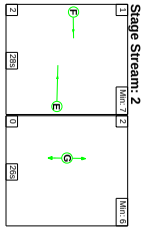
Scenario 5: '2023 AM Base + Development' (FG5: '2023 AM Base + Development', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

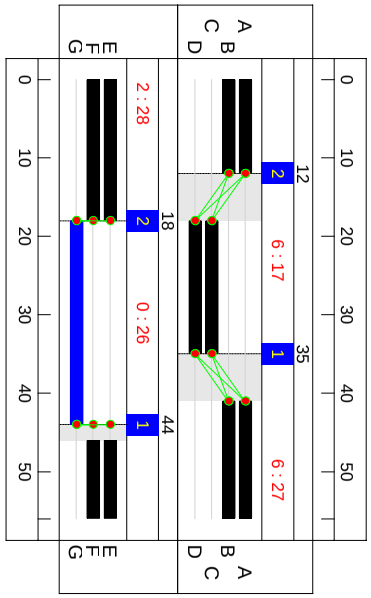
Stage	1	2
Duration	27	17
Change Point	35	12

Stage Stream: 2

Stage	1	2
Duration	28	26
Change Point	44	18

Full Input Data And Results

Signal Timings Diagram



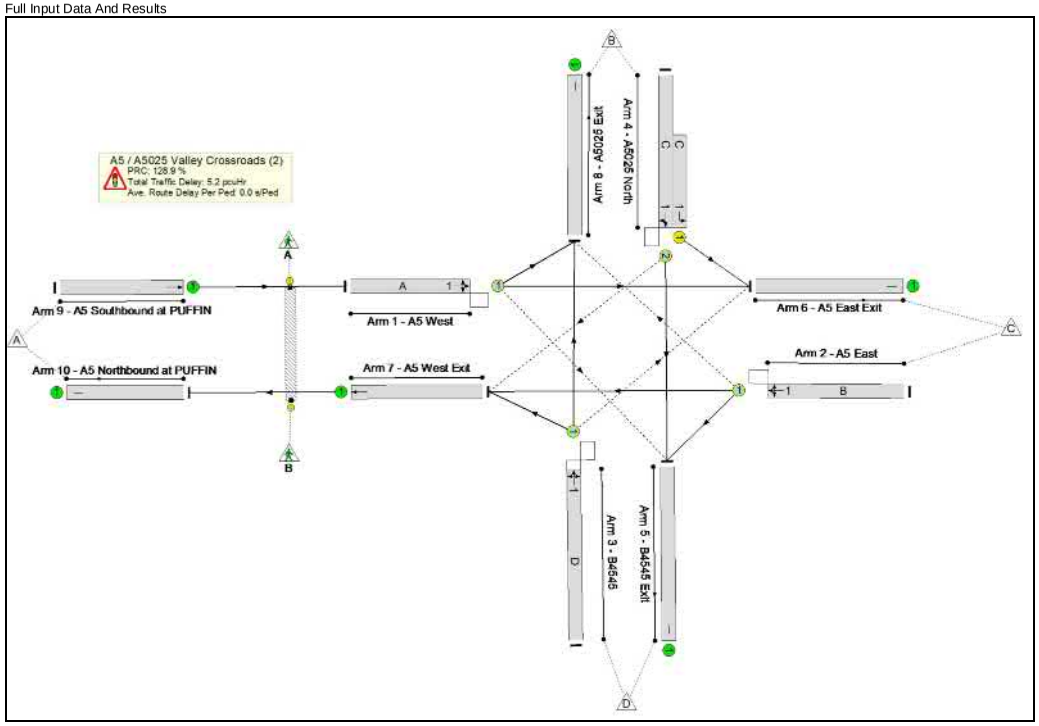
Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: North Wales Connection	-	-	**N/A**	-	-		-	-	-	-	-	-	**39.3%**
A5 / A5025 Valley Crossroads (2)	-	-	**N/A**	-	-		-	-	-	-	-	-	**39.3%**
1/1	A5 West Right Ahead Left	O	1	N/A	A		1	27	-	237	1871	935	25.3%
2/1	A5 East Left Ahead Right	O	1	N/A	B		1	27	-	347	1805	883	39.3%
3/1	B4545 Right Left Ahead	O	1	N/A	D		1	17	-	190	1753	497	38.3%
4/2+4/1	A5025 North Ahead Left Right	O+U	1	N/A	C		1	17	-	424	1956:1800	542+579	37.9 : 37.9%
5/1	B4545 Exit	U	N/A	N/A	-		-	-	-	188	Inf	Inf	0.0%
6/1	A5 East Exit	U	N/A	N/A	-		-	-	-	504	Inf	Inf	0.0%
7/1	A5 West Exit Ahead	U	N/A	N/A	-		-	-	-	267	Inf	Inf	0.0%
8/1	A5025 Exit	U	N/A	N/A	-		-	-	-	239	Inf	Inf	0.0%
9/1	A5 Southbound at PUFFIN Ahead	U	N/A	N/A	-		-	-	-	237	Inf	Inf	0.0%
10/1	A5 Northbound at PUFFIN	U	N/A	N/A	-		-	-	-	267	Inf	Inf	0.0%
Ped Link: P1	Puffin Crossing	-	2	-	G		1	26	-	0	-	33429	0.0%

Network Layout Diagram

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: North Wales Connection	-	-	**471**	**0**	**2**	**3.8**	**1.1**	**0.3**	**5.2**	-	-	-	-
A5 / A5025 Valley Crossroads (2)	-	-	**471**	**0**	**2**	**3.8**	**1.1**	**0.3**	**5.2**	-	-	-	-
1/1	237	237	27	0	0	0.5	0.2	0.0	0.7	10.6	2.1	0.2	2.3
2/1	347	347	158	0	0	0.8	0.3	0.1	1.2	12.9	3.3	0.3	3.6
3/1	190	190	131	0	2	0.8	0.3	0.1	1.2	22.9	2.2	0.3	2.5
4/2+4/1	424	424	155	0	0	1.7	0.3	0.0	2.1	17.4	2.6	0.3	2.9
5/1	188	188	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	504	504	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	267	267	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	239	239	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	237	237	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	267	267	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0

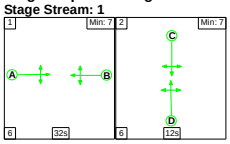
C1 - A5 / A5025 Valley Crossroads Stream: 1 PRC for Signalled Lanes (%): 128.9 Total Delay for Signalled Lanes (pcuHr): 5.20 Cycle Time (s): 56
C1 - A5 / A5025 Valley Crossroads Stream: 2 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 0.00 Cycle Time (s): 56
PRC Over All Lanes (%): 128.9 Total Delay Over All Lanes(pcuHr): 5.20



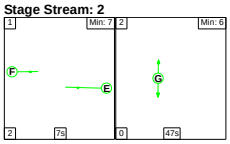
Scenario 6: '2023 PM Base + Development ' (FG6: '2023 PM Base + Development', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

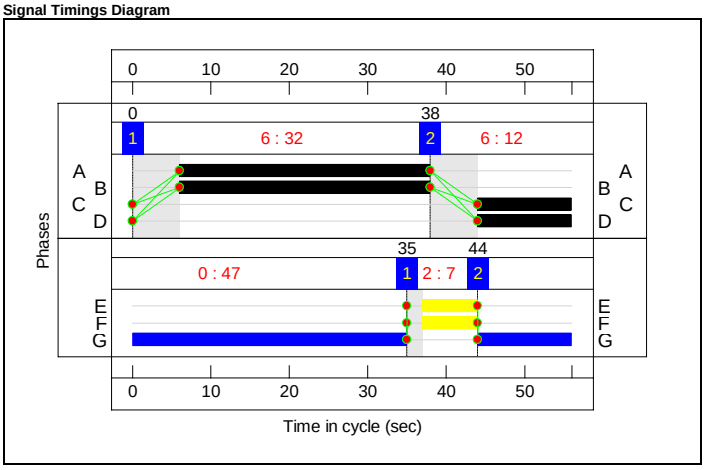
Stage Stream: 1

Stage	1	2
Duration	32	12
Change Point	0	38

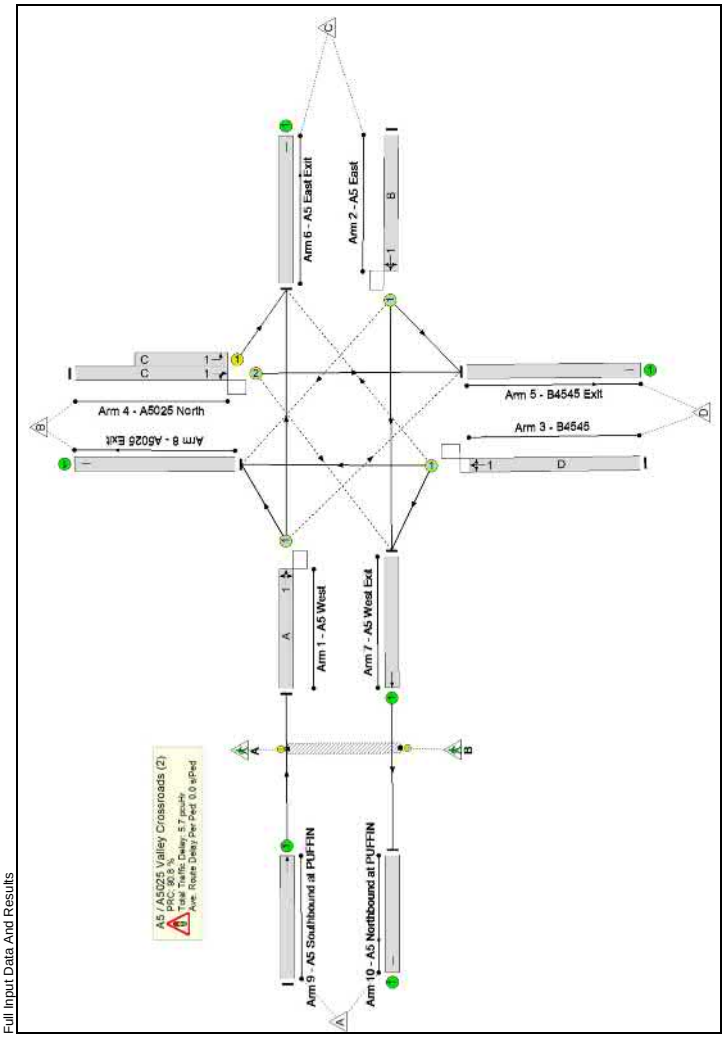
Stage Stream: 2

Stage	1	2
Duration	7	47
Change Point	35	44

Signal Timings Diagram



Network Layout Diagram



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: North Wales Connection	-	-	**N/A**	-	-		-	-	-	-	-	-	**47.2%**
A5 / A5025 Valley Crossroads (2)	-	-	**N/A**	-	-		-	-	-	-	-	-	**47.2%**
1/1	A5 West Right Ahead Left	O	1	N/A	A		1	32	-	320	1807	1065	30.1%
2/1	A5 East Left Ahead Right	O	1	N/A	B		1	32	-	490	1828	1057	46.4%
3/1	B4545 Right Left Ahead	O	1	N/A	D		1	12	-	180	1743	382	47.2%
4/2+4/1	A5025 North Ahead Left Right	O+U	1	N/A	C		1	12	-	338	1951:1800	380+418	39.2 : 45.2%
5/1	B4545 Exit	U	N/A	N/A	-		-	-	-	211	Inf	Inf	0.0%
6/1	A5 East Exit	U	N/A	N/A	-		-	-	-	367	Inf	Inf	0.0%
7/1	A5 West Exit Ahead	U	N/A	N/A	-		-	-	-	355	Inf	Inf	0.0%
8/1	A5025 Exit	U	N/A	N/A	-		-	-	-	395	Inf	Inf	0.0%
9/1	A5 Southbound at PUFFIN Ahead	U	N/A	N/A	-		-	-	-	320	Inf	Inf	0.0%
10/1	A5 Northbound at PUFFIN	U	N/A	N/A	-		-	-	-	355	Inf	Inf	0.0%
Ped Link: P1	Puffin Crossing	-	2	-	G		1	47	-	0	-	60429	0.0%

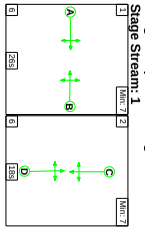
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: North Wales Connection	-	-	**428**	**0**	**1**	**4.0**	**1.5**	**0.2**	**5.7**	-	-	-	-
A5 / A5025 Valley Crossroads (2)	-	-	**428**	**0**	**1**	**4.0**	**1.5**	**0.2**	**5.7**	-	-	-	-
1/1	320	320	48	0	0	0.5	0.2	0.0	0.7	8.2	2.4	0.2	2.6
2/1	490	490	188	0	0	0.9	0.4	0.1	1.4	10.4	4.4	0.4	4.8
3/1	180	180	75	0	1	0.9	0.4	0.1	1.4	28.5	2.3	0.4	2.8
4/2+4/1	338	338	117	0	0	1.7	0.4	0.1	2.1	22.8	2.5	0.4	2.9
5/1	211	211	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	367	367	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	355	355	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	395	395	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	320	320	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	355	355	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0

C1 - A5 / A5025 Valley Crossroads	Stream: 1 PRC for Signalled Lanes (%):	90.8	Total Delay for Signalled Lanes (pcuHr):	5.71	Cycle Time (s):	56
C1 - A5 / A5025 Valley Crossroads	Stream: 2 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	56
	PRC Over All Lanes (%):	90.8	Total Delay Over All Lanes(pcuHr):	5.71		

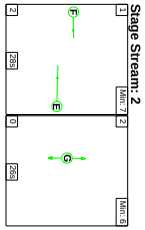
Scenario 7: '2023 AM Base + Development + Committed' (No Flow Group, Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

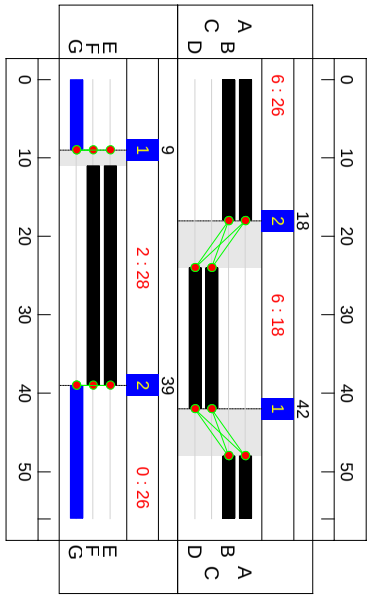
Stage Stream: 1

Stage	1	2
Duration	26	18
Change Point	42	18

Stage Stream: 2

Stage	1	2
Duration	28	26
Change Point	9	39

Signal Timings Diagram



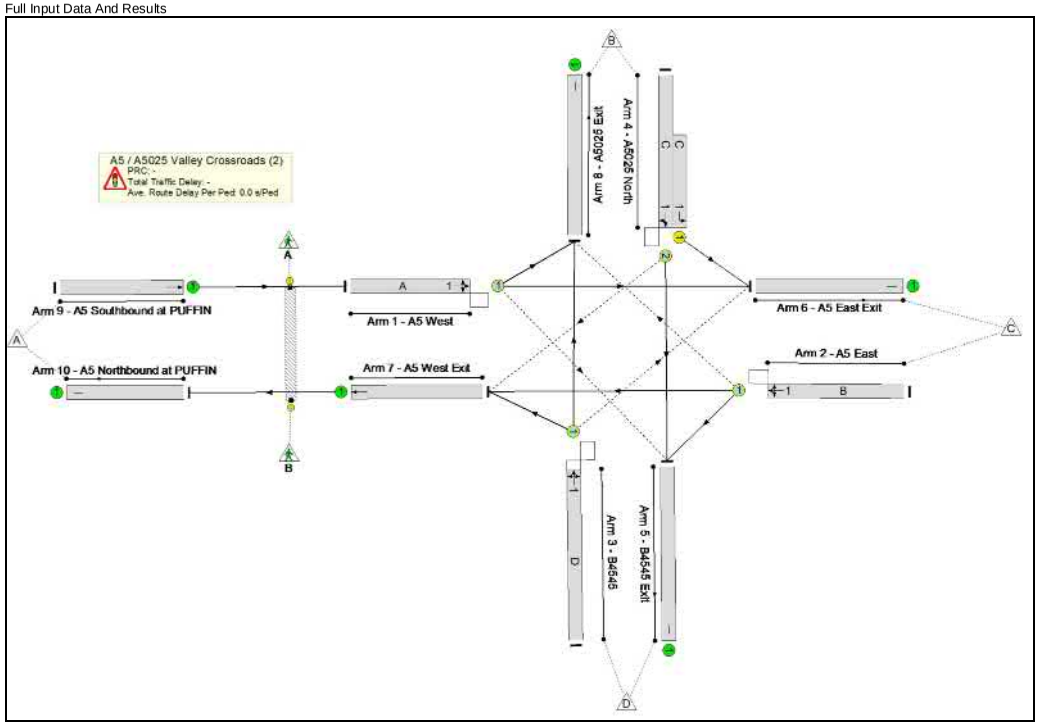
Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: North Wales Connection	-	-	**N/A**	-	-		-	-	-	-	-	-	**0.0%**
A5 / A5025 Valley Crossroads (2)	-	-	**N/A**	-	-		-	-	-	-	-	-	**0.0%**
1/1	A5 West Right Ahead Left	O	1	N/A	A		1	26	-	237	1871	-	-
2/1	A5 East Left Ahead Right	O	1	N/A	B		1	26	-	433	1796	-	-
3/1	B4545 Right Left Ahead	O	1	N/A	D		1	18	-	190	1753	-	-
4/2+4/1	A5025 North Ahead Left Right	O+U	1	N/A	C		1	18	-	510	1956:1800	-	-
5/1	B4545 Exit	U	N/A	N/A	-		-	-	-	188	Inf	Inf	-
6/1	A5 East Exit	U	N/A	N/A	-		-	-	-	590	Inf	Inf	-
7/1	A5 West Exit Ahead	U	N/A	N/A	-		-	-	-	267	Inf	Inf	-
8/1	A5025 Exit	U	N/A	N/A	-		-	-	-	325	Inf	Inf	-
9/1	A5 Southbound at PUFFIN Ahead	U	N/A	N/A	-		-	-	-	237	Inf	Inf	-
10/1	A5 Northbound at PUFFIN	U	N/A	N/A	-		-	-	-	267	Inf	Inf	-
Ped Link: P1	Puffin Crossing	-	2	-	G		1	26	-	0	-	-	0.0%

Network Layout Diagram

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: North Wales Connection	-	-	**0**	**0**	**0**	**0.0**	**0.0**	**0.0**	**0.0**	-	-	-	-
A5 / A5025 Valley Crossroads (2)	-	-	**0**	**0**	**0**	**0.0**	**0.0**	**0.0**	**0.0**	-	-	-	-
1/1	-	-	-	-	-	-	-	-	-	-	-	-	-
2/1	-	-	-	-	-	-	-	-	-	-	-	-	-
3/1	-	-	-	-	-	-	-	-	-	-	-	-	-
4/2+4/1	-	-	-	-	-	-	-	-	-	-	-	-	-
5/1	-	-	-	-	-	-	-	-	-	-	-	-	-
6/1	-	-	-	-	-	-	-	-	-	-	-	-	-
7/1	-	-	-	-	-	-	-	-	-	-	-	-	-
8/1	-	-	-	-	-	-	-	-	-	-	-	-	-
9/1	-	-	-	-	-	-	-	-	-	-	-	-	-
10/1	-	-	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P1	-	0	-	-	-	-	-	-	0.0	-	-	-	0.0

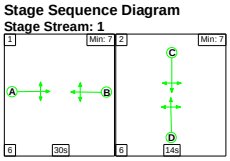
C1 - A5 / A5025 Valley Crossroads Stream: 1 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 0.00 Cycle Time (s): 56
C1 - A5 / A5025 Valley Crossroads Stream: 2 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 0.00 Cycle Time (s): 56
PRC Over All Lanes (%): 0.0 Total Delay Over All Lanes(pcuHr): 0.00



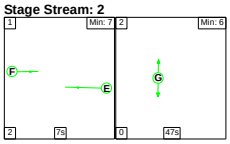
Scenario 8: '2023 PM Base + Development + Committed' (No Flow Group, Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

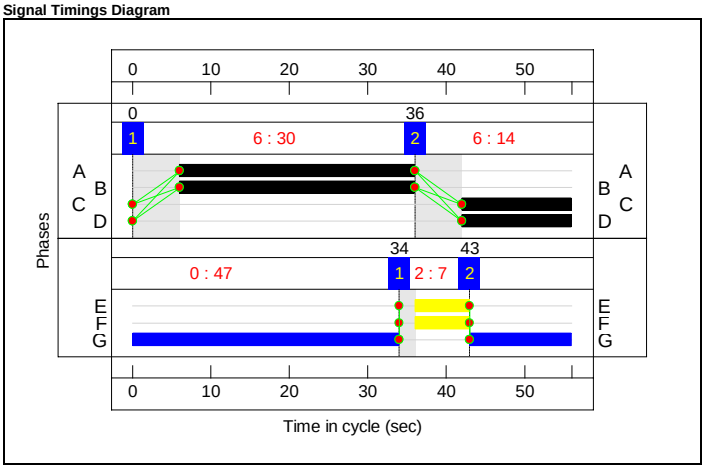
Stage Stream: 1

Stage	1	2
Duration	30	14
Change Point	0	36

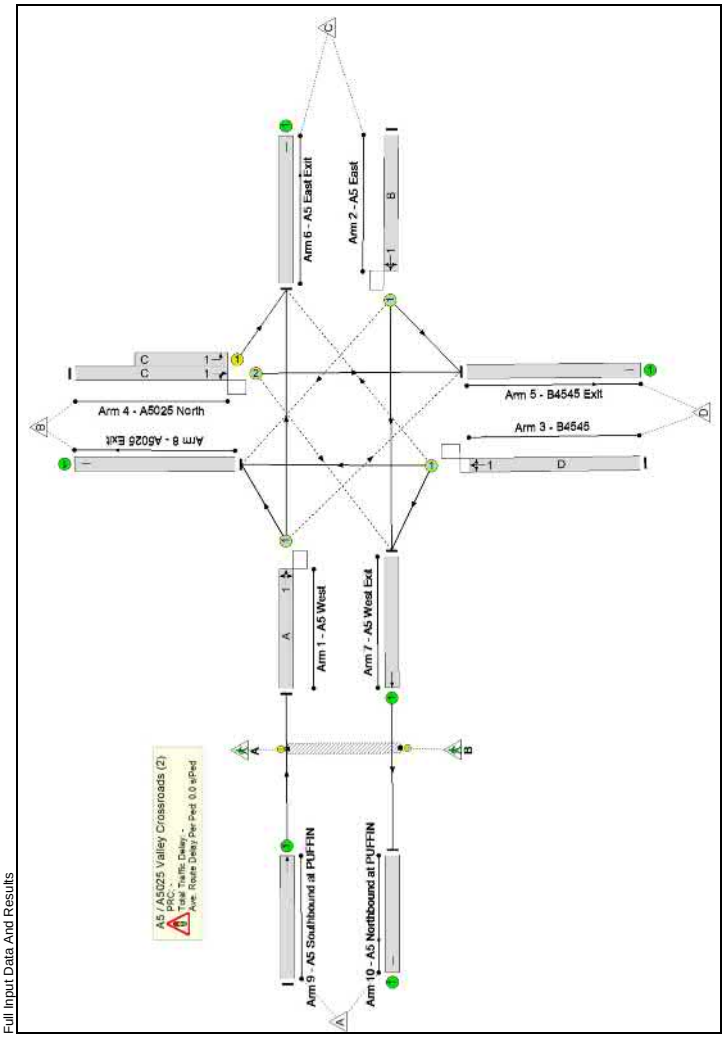
Stage Stream: 2

Stage	1	2
Duration	7	47
Change Point	34	43

Signal Timings Diagram



Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: North Wales Connection	-	-	**N/A**	-	-		-	-	-	-	-	-	**0.0%**
A5 / A5025 Valley Crossroads (2)	-	-	**N/A**	-	-		-	-	-	-	-	-	**0.0%**
1/1	A5 West Right Ahead Left	O	1	N/A	A		1	30	-	320	1807	-	-
2/1	A5 East Left Ahead Right	O	1	N/A	B		1	30	-	576	1817	-	-
3/1	B4545 Right Left Ahead	O	1	N/A	D		1	14	-	180	1743	-	-
4/2+4/1	A5025 North Ahead Left Right	O+U	1	N/A	C		1	14	-	424	1951:1800	-	-
5/1	B4545 Exit	U	N/A	N/A	-		-	-	-	211	Inf	Inf	-
6/1	A5 East Exit	U	N/A	N/A	-		-	-	-	453	Inf	Inf	-
7/1	A5 West Exit Ahead	U	N/A	N/A	-		-	-	-	355	Inf	Inf	-
8/1	A5025 Exit	U	N/A	N/A	-		-	-	-	481	Inf	Inf	-
9/1	A5 Southbound at PUFFIN Ahead	U	N/A	N/A	-		-	-	-	320	Inf	Inf	-
10/1	A5 Northbound at PUFFIN	U	N/A	N/A	-		-	-	-	355	Inf	Inf	-
Ped Link: P1	Puffin Crossing	-	2	-	G		1	47	-	0	-	-	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: North Wales Connection	-	-	**0**	**0**	**0**	**0.0**	**0.0**	**0.0**	**0.0**	-	-	-	-
A5 / A5025 Valley Crossroads (2)	-	-	**0**	**0**	**0**	**0.0**	**0.0**	**0.0**	**0.0**	-	-	-	-
1/1	-	-	-	-	-	-	-	-	-	-	-	-	-
2/1	-	-	-	-	-	-	-	-	-	-	-	-	-
3/1	-	-	-	-	-	-	-	-	-	-	-	-	-
4/2+4/1	-	-	-	-	-	-	-	-	-	-	-	-	-
5/1	-	-	-	-	-	-	-	-	-	-	-	-	-
6/1	-	-	-	-	-	-	-	-	-	-	-	-	-
7/1	-	-	-	-	-	-	-	-	-	-	-	-	-
8/1	-	-	-	-	-	-	-	-	-	-	-	-	-
9/1	-	-	-	-	-	-	-	-	-	-	-	-	-
10/1	-	-	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P1	-	0	-	-	-	-	-	-	0.0	-	-	-	0.0

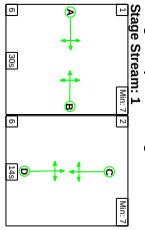
C1 - A5 / A5025 Valley Crossroads	Stream: 1 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	56
C1 - A5 / A5025 Valley Crossroads	Stream: 2 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s):	56
	PRC Over All Lanes (%):	0.0	Total Delay Over All Lanes(pcuHr):	0.00		

Full Input Data And Results

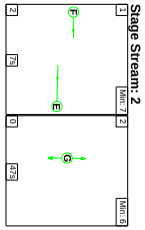
Scenario 9: '2023 PM Base + Seasonality' (FG7: '2023 PM Base + Seasonality', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

Stage Stream: 1

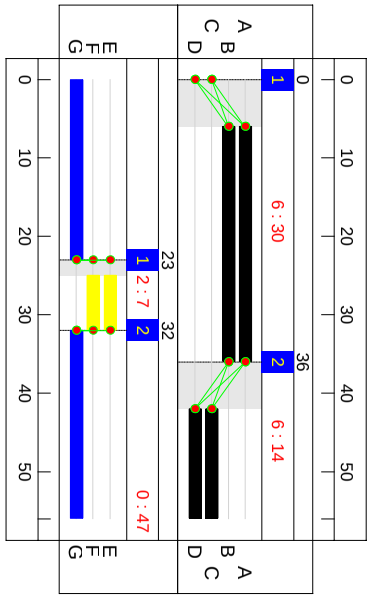
Stage	1	2
Duration	30	14
Change Point	0	36

Stage Stream: 2

Stage	1	2
Duration	7	47
Change Point	23	32

Full Input Data And Results

Signal Timings Diagram



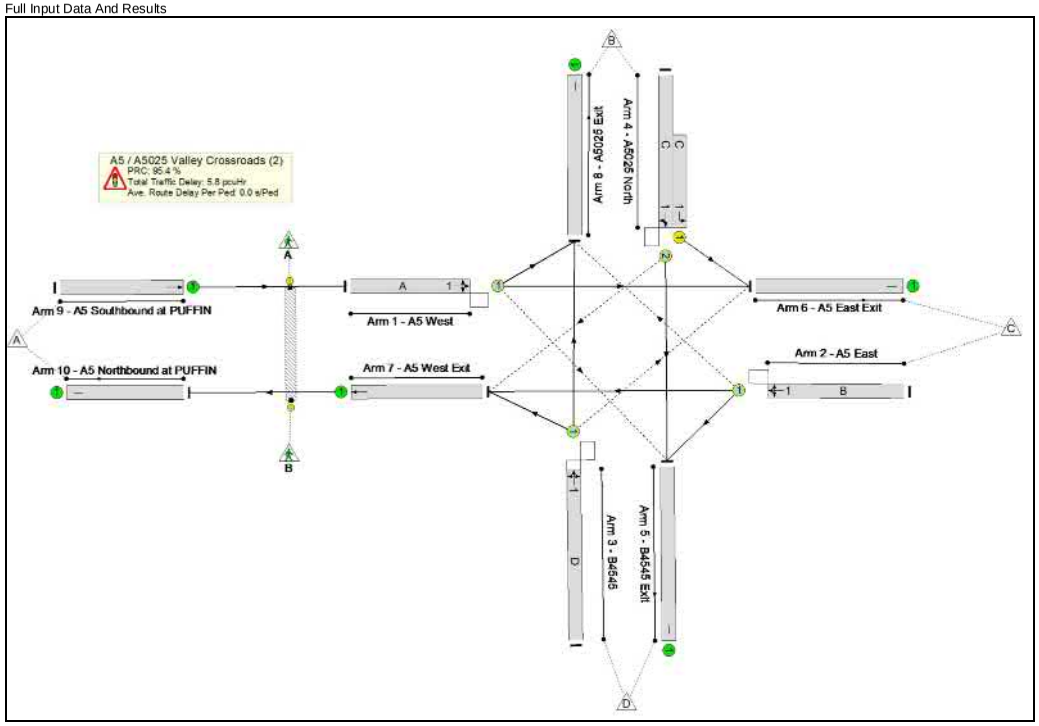
Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: North Wales Connection	-	-	**N/A**	-	-		-	-	-	-	-	-	**46.1%**
A5 / A5025 Valley Crossroads (2)	-	-	**N/A**	-	-		-	-	-	-	-	-	**46.1%**
1/1	A5 West Right Ahead Left	O	1	N/A	A		1	30	-	384	1806	1000	38.4%
2/1	A5 East Left Ahead Right	O	1	N/A	B		1	30	-	466	1847	1022	45.6%
3/1	B4545 Right Left Ahead	O	1	N/A	D		1	14	-	215	1743	467	46.1%
4/2+4/1	A5025 North Ahead Left Right	O+U	1	N/A	C		1	14	-	284	1951:1800	419+250	42.5 : 42.5%
5/1	B4545 Exit	U	N/A	N/A	-		-	-	-	253	Inf	Inf	0.0%
6/1	A5 East Exit	U	N/A	N/A	-		-	-	-	319	Inf	Inf	0.0%
7/1	A5 West Exit Ahead	U	N/A	N/A	-		-	-	-	425	Inf	Inf	0.0%
8/1	A5025 Exit	U	N/A	N/A	-		-	-	-	352	Inf	Inf	0.0%
9/1	A5 Southbound at PUFFIN Ahead	U	N/A	N/A	-		-	-	-	384	Inf	Inf	0.0%
10/1	A5 Northbound at PUFFIN	U	N/A	N/A	-		-	-	-	425	Inf	Inf	0.0%
Ped Link: P1	Puffin Crossing	-	2	-	G		1	47	-	0	-	60429	0.0%

Network Layout Diagram

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: North Wales Connection	-	-	**391**	**0**	**2**	**4.0**	**1.5**	**0.3**	**5.8**	-	-	-	-
A5 / A5025 Valley Crossroads (2)	-	-	**391**	**0**	**2**	**4.0**	**1.5**	**0.3**	**5.8**	-	-	-	-
1/1	384	384	58	0	0	0.8	0.3	0.1	1.1	10.5	3.3	0.3	3.6
2/1	466	466	104	0	0	1.0	0.4	0.1	1.5	11.3	4.3	0.4	4.7
3/1	215	215	89	0	2	1.0	0.4	0.0	1.5	24.7	2.7	0.4	3.2
4/2+4/1	284	284	140	0	0	1.3	0.4	0.1	1.8	22.3	2.2	0.4	2.6
5/1	253	253	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	319	319	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	425	425	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	352	352	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	384	384	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	425	425	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0

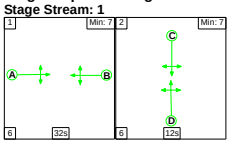
C1 - A5 / A5025 Valley Crossroads Stream: 1 PRC for Signalled Lanes (%): 95.4 Total Delay for Signalled Lanes (pcuHr): 5.81 Cycle Time (s): 56
C1 - A5 / A5025 Valley Crossroads Stream: 2 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 0.00 Cycle Time (s): 56
PRC Over All Lanes (%): 95.4 Total Delay Over All Lanes(pcuHr): 5.81



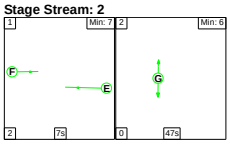
Scenario 10: '2023 PM Base + Seasonality + Development ' (FG8: '2023 PM Base + Seasonality + Development', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

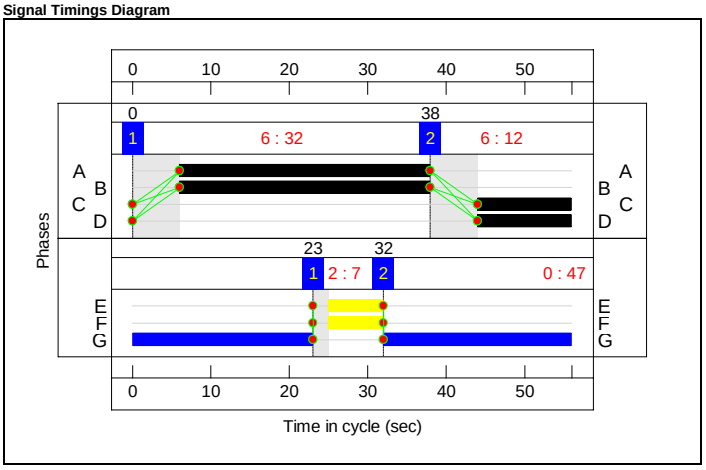
Stage Stream: 1

Stage	1	2
Duration	32	12
Change Point	0	38

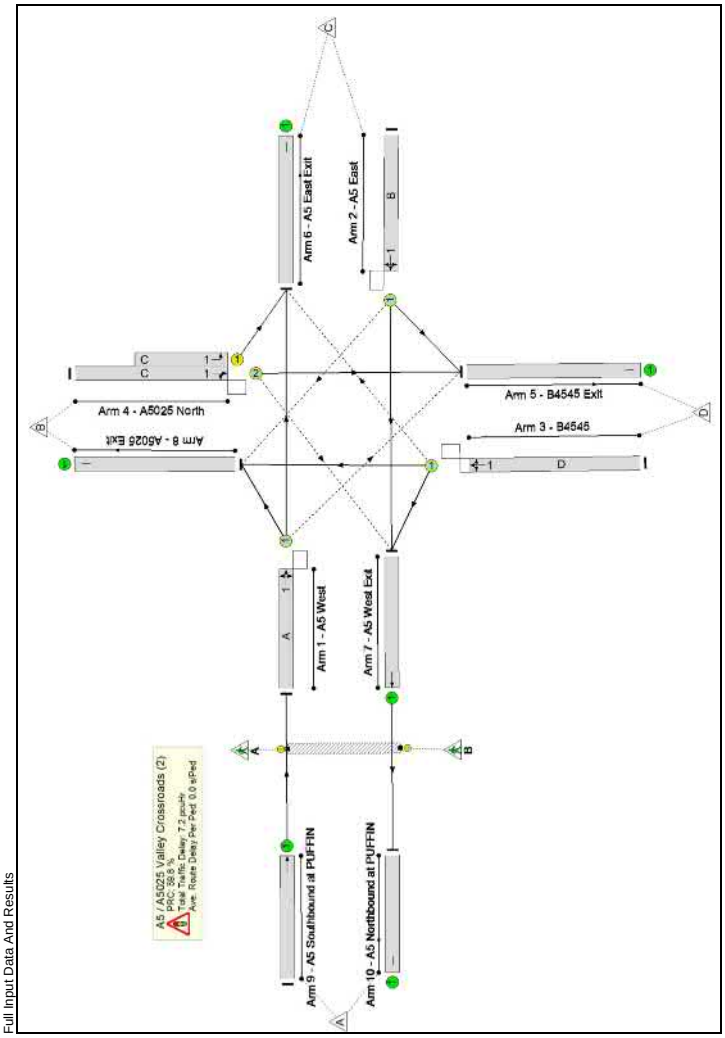
Stage Stream: 2

Stage	1	2
Duration	7	47
Change Point	23	32

Signal Timings Diagram



Network Layout Diagram



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: North Wales Connection	-	-	**N/A**	-	-		-	-	-	-	-	-	**56.3%**
A5 / A5025 Valley Crossroads (2)	-	-	**N/A**	-	-		-	-	-	-	-	-	**56.3%**
1/1	A5 West Right Ahead Left	O	1	N/A	A		1	32	-	384	1806	1064	36.1%
2/1	A5 East Left Ahead Right	O	1	N/A	B		1	32	-	567	1830	1048	54.1%
3/1	B4545 Right Left Ahead	O	1	N/A	D		1	12	-	215	1743	382	56.3%
4/2+4/1	A5025 North Ahead Left Right	O+U	1	N/A	C		1	12	-	385	1951:1800	354+418	50.3 : 49.5%
5/1	B4545 Exit	U	N/A	N/A	-		-	-	-	253	Inf	Inf	0.0%
6/1	A5 East Exit	U	N/A	N/A	-		-	-	-	420	Inf	Inf	0.0%
7/1	A5 West Exit Ahead	U	N/A	N/A	-		-	-	-	425	Inf	Inf	0.0%
8/1	A5025 Exit	U	N/A	N/A	-		-	-	-	453	Inf	Inf	0.0%
9/1	A5 Southbound at PUFFIN Ahead	U	N/A	N/A	-		-	-	-	384	Inf	Inf	0.0%
10/1	A5 Northbound at PUFFIN	U	N/A	N/A	-		-	-	-	425	Inf	Inf	0.0%
Ped Link: P1	Puffin Crossing	-	2	-	G		1	47	-	0	-	60429	0.0%

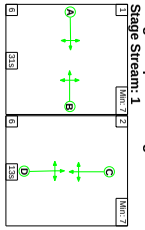
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: North Wales Connection	-	-	**492**	**0**	**2**	**4.8**	**2.0**	**0.4**	**7.2**	-	-	-	-
A5 / A5025 Valley Crossroads (2)	-	-	**492**	**0**	**2**	**4.8**	**2.0**	**0.4**	**7.2**	-	-	-	-
1/1	384	384	58	0	0	0.6	0.3	0.0	0.9	8.8	3.1	0.3	3.4
2/1	567	567	205	0	0	1.1	0.6	0.1	1.8	11.6	5.4	0.6	5.9
3/1	215	215	89	0	2	1.1	0.6	0.1	1.9	31.0	2.9	0.6	3.6
4/2+4/1	385	385	140	0	0	2.0	0.5	0.1	2.6	24.1	2.8	0.5	3.3
5/1	253	253	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	420	420	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	425	425	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	453	453	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	384	384	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	425	425	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
Ped Link: P1	0	0	-	-	-	-	-	-	0.0	0.0	-	-	0.0

C1 - A5 / A5025 Valley Crossroads	Stream: 1 PRC for Signalled Lanes (%):	59.8	Total Delay for Signalled Lanes (pcuHr):	7.19	Cycle Time (s): 56
C1 - A5 / A5025 Valley Crossroads	Stream: 2 PRC for Signalled Lanes (%):	0.0	Total Delay for Signalled Lanes (pcuHr):	0.00	Cycle Time (s): 56
	PRC Over All Lanes (%):	59.8	Total Delay Over All Lanes(pcuHr):	7.19	

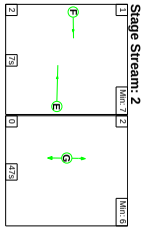
Scenario 11: '2023 PM Base + Seasonlaity + Development + Committed' (No Flow Group, Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

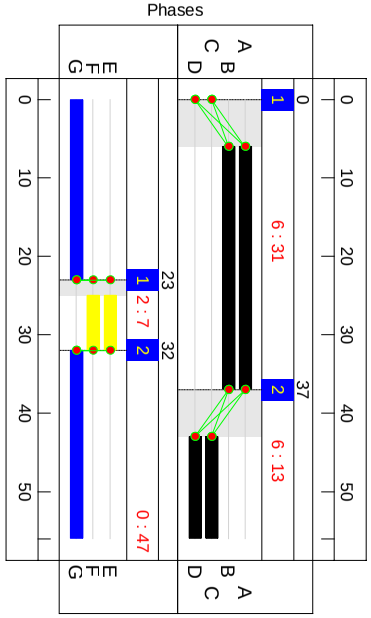
Stage Stream: 1

Stage	1	2
Duration	31	13
Change Point	0	37

Stage Stream: 2

Stage	1	2
Duration	7	47
Change Point	23	32

Signal Timings Diagram



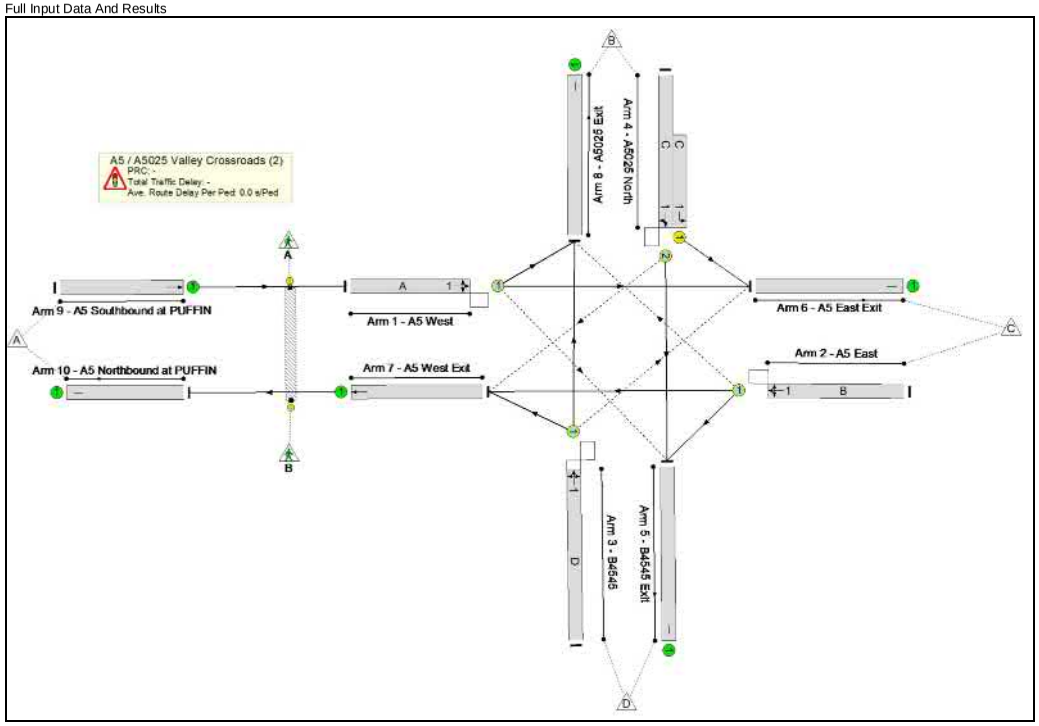
Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: North Wales Connection	-	-	**N/A**	-	-		-	-	-	-	-	-	**0.0%**
A5 / A5025 Valley Crossroads (2)	-	-	**N/A**	-	-		-	-	-	-	-	-	**0.0%**
1/1	A5 West Right Ahead Left	O	1	N/A	A		1	31	-	384	1806	-	-
2/1	A5 East Left Ahead Right	O	1	N/A	B		1	31	-	653	1821	-	-
3/1	B4545 Right Left Ahead	O	1	N/A	D		1	13	-	215	1743	-	-
4/2+4/1	A5025 North Ahead Left Right	O+U	1	N/A	C		1	13	-	471	1951:1800	-	-
5/1	B4545 Exit	U	N/A	N/A	-		-	-	-	253	Inf	Inf	-
6/1	A5 East Exit	U	N/A	N/A	-		-	-	-	506	Inf	Inf	-
7/1	A5 West Exit Ahead	U	N/A	N/A	-		-	-	-	425	Inf	Inf	-
8/1	A5025 Exit	U	N/A	N/A	-		-	-	-	539	Inf	Inf	-
9/1	A5 Southbound at PUFFIN Ahead	U	N/A	N/A	-		-	-	-	384	Inf	Inf	-
10/1	A5 Northbound at PUFFIN	U	N/A	N/A	-		-	-	-	425	Inf	Inf	-
Ped Link: P1	Puffin Crossing	-	2	-	G		1	47	-	0	-	-	0.0%

Network Layout Diagram

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: North Wales Connection	-	-	**0**	**0**	**0**	**0.0**	**0.0**	**0.0**	**0.0**	-	-	-	-
A5 / A5025 Valley Crossroads (2)	-	-	**0**	**0**	**0**	**0.0**	**0.0**	**0.0**	**0.0**	-	-	-	-
1/1	-	-	-	-	-	-	-	-	-	-	-	-	-
2/1	-	-	-	-	-	-	-	-	-	-	-	-	-
3/1	-	-	-	-	-	-	-	-	-	-	-	-	-
4/2+4/1	-	-	-	-	-	-	-	-	-	-	-	-	-
5/1	-	-	-	-	-	-	-	-	-	-	-	-	-
6/1	-	-	-	-	-	-	-	-	-	-	-	-	-
7/1	-	-	-	-	-	-	-	-	-	-	-	-	-
8/1	-	-	-	-	-	-	-	-	-	-	-	-	-
9/1	-	-	-	-	-	-	-	-	-	-	-	-	-
10/1	-	-	-	-	-	-	-	-	-	-	-	-	-
Ped Link: P1	-	0	-	-	-	-	-	-	0.0	-	-	-	0.0

C1 - A5 / A5025 Valley Crossroads Stream: 1 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 0.00 Cycle Time (s): 56
C1 - A5 / A5025 Valley Crossroads Stream: 2 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 0.00 Cycle Time (s): 56
PRC Over All Lanes (%): 0.0 Total Delay Over All Lanes(pcuHr): 0.00



Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A55_J3_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A55 J3
Report generation date: 31/05/2018 10:59:35

- » (Default Analysis Set) - 2017 Base, AM
- » (Default Analysis Set) - 2017 Base, PM
- » (Default Analysis Set) - 2023 Base, AM
- » (Default Analysis Set) - 2023 Base, PM
- » (Default Analysis Set) - 2023 Base + Dev, AM
- » (Default Analysis Set) - 2023 Base + Dev, PM
- » (Default Analysis Set) - 2023 Base + Dev + Seasonality, AM Aug
- » (Default Analysis Set) - 2023 Base + Dev + Seasonality, PM Aug

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2017 Base			
Junction 1 - Arm A5N	0.18	3.31	0.15	A
Junction 1 - Arm WBOFF	0.17	3.19	0.15	A
Junction 1 - Arm A5S	0.14	3.66	0.12	A
Junction 2 - Arm A5N	0.52	4.34	0.34	A
Junction 2 - Arm A5S	0.27	3.74	0.21	A
Junction 2 - Arm EBOFF	0.07	3.26	0.07	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:15 - 17:45
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:15 - 17:45
"D7 - 2023 Base + Dev + Seasonality, AM Aug" model duration: 07:45 - 09:15
"D8 - 2023 Base + Dev + Seasonality, PM Aug" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 31/05/2018 10:59:24

File summary

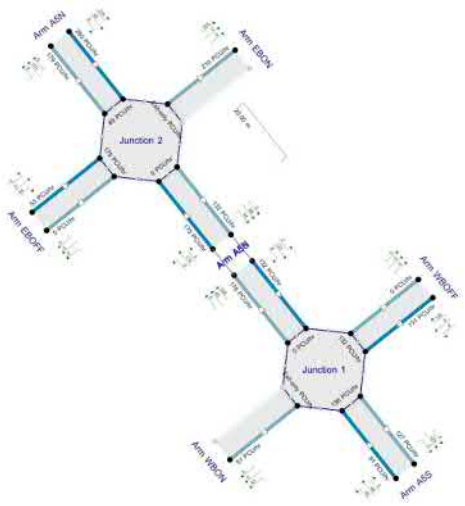
Title	(untitled)
Location	
Site Number	
Date	22/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction 1 - Arm A5N	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 2 - Arm A5S	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, AM	2017 Base	AM		Varies by Arm	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	1	A55 J3 W/B	Roundabout	A5N,WBOFF,A5S,WBON			3.35	A
2	2	A55 J3 E/B	Roundabout	A5N,EBON,A5S,EBOFF			4.03	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description
1	A5N	A5N	(untitled)	
1	WBOFF	WBOFF	(untitled)	
1	A5S	A5S	(untitled)	
1	WBON	WBON	(untitled)	
2	A5N	A5N	(untitled)	
2	EBON	EBON	(untitled)	
2	A5S	A5S	(untitled)	
2	EBOFF	EBOFF	(untitled)	

Capacity Options

Junction	Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	A5N	0.00	99999.00
1	WBOFF	0.00	99999.00
1	A5S	0.00	99999.00
1	WBON	0.00	99999.00
2	A5N	0.00	99999.00
2	EBON	0.00	99999.00
2	A5S	0.00	99999.00
2	EBOFF	0.00	99999.00

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	A5N	3.61	5.07	5.16	12.98	60.04	32.00	
1	WBOFF	4.86	4.86	0.00	14.16	60.04	35.00	
1	A5S	3.20	5.13	5.06	13.73	60.04	29.00	
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	A5N	3.89	4.59	5.75	13.42	58.41	31.00	
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	A5S	3.65	4.83	2.59	17.17	58.41	35.00	
2	EBOFF	4.38	4.38	0.00	19.28	58.41	33.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	A5N		(calculated)	(calculated)	0.476	1281.728
1	WBOFF		(calculated)	(calculated)	0.498	1417.332
1	A5S		(calculated)	(calculated)	0.467	1209.699
1	WBON		(calculated)	(calculated)	Exit-only	Exit-only
2	A5N		(calculated)	(calculated)	0.487	1294.899
2	EBON		(calculated)	(calculated)	Exit-only	Exit-only
2	A5S		(calculated)	(calculated)	0.475	1220.336
2	EBOFF		(calculated)	(calculated)	0.494	1310.901

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	A5N	Linked Arm		N/A	
1	WBOFF	ONE HOUR	✓	175.00	100.000
1	A5S	ONE HOUR	✓	121.00	100.000
1	WBON	Exit-only	✓	Exit-only	Exit-only
2	A5N	ONE HOUR	✓	391.00	100.000
2	EBON	Exit-only	✓	Exit-only	Exit-only
2	A5S	Linked Arm		N/A	
2	EBOFF	ONE HOUR	✓	71.00	100.000

Linked Arm Data

Junction	Arm	From Junction ID	From Arm ID	Link Type	Flow Source	Uniform Flow (PCU/hr)	Flow Multiplier (%)	Internal Storage Space (PCU)
1	A5N	2	A5S	Simple (vertical queueing)	Normal	0.00	100.00	
2	A5S	1	A5N	Simple (vertical queueing)	Normal	0.00	100.00	

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.000	0.000	165.000	11.000
	WBOFF	170.000	0.000	5.000	0.000
	A5S	64.000	0.000	0.000	57.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.00	0.00	0.94	0.06
	WBOFF	0.97	0.00	0.03	0.00
	A5S	0.53	0.00	0.00	0.47
	WBON	0.25	0.25	0.25	0.25

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Counts / Proportions (PCU/hr) - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	0.000	274.000	117.000	0.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	228.000	6.000	0.000	0.000
	EBOFF	12.000	0.000	59.000	0.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	0.00	0.70	0.30	0.00
	EBON	0.25	0.25	0.25	0.25
	A5S	0.97	0.03	0.00	0.00
	EBOFF	0.17	0.00	0.83	0.00

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	1.000	1.000	1.000	1.000
	WBOFF	1.000	1.000	1.000	1.000
	A5S	1.000	1.000	1.000	1.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.0	0.0	0.0	0.0
	WBOFF	0.0	0.0	0.0	0.0
	A5S	0.0	0.0	0.0	0.0
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Average PCU Per Vehicle - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	1.000	1.000	1.000	1.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	1.000	1.000	1.000	1.000
	EBOFF	1.000	1.000	1.000	1.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	0.0	0.0	0.0	0.0
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	0.0	0.0	0.0	0.0
	EBOFF	0.0	0.0	0.0	0.0

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	A5N	0.15	3.31	0.18	A
1	WBOFF	0.15	3.19	0.17	A
1	A5S	0.12	3.66	0.14	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	0.34	4.34	0.52	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.21	3.74	0.27	A
2	EBOFF	0.07	3.26	0.07	A

Main Results for each time segment

Main results: (07:45-08:00)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	131.99	131.53	0.00	0.00	1281.73	0.103	0.11	3.127	A
1	WBOFF	131.75	131.32	131.53	0.00	1351.82	0.097	0.11	2.949	A
1	A5S	91.10	90.75	135.79	0.00	1146.29	0.079	0.09	3.410	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	294.37	293.17	48.75	0.00	1271.14	0.232	0.30	3.676	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	175.57	174.90	0.00	0.00	1220.34	0.144	0.17	3.442	A
2	EBOFF	53.45	53.27	174.90	0.00	1224.48	0.044	0.05	3.073	A

Main results: (08:00-08:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	158.09	157.99	0.00	0.00	1281.73	0.123	0.14	3.203	A
1	WBOFF	157.32	157.22	157.99	0.00	1338.65	0.118	0.13	3.046	A
1	A5S	108.78	108.70	162.60	0.00	1133.77	0.096	0.11	3.511	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	351.50	351.17	58.39	0.00	1266.45	0.278	0.38	3.932	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	210.22	210.06	0.00	0.00	1220.34	0.172	0.21	3.563	A
2	EBOFF	63.83	63.79	210.06	0.00	1207.10	0.053	0.06	3.148	A

Main results: (08:15-08:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	193.57	193.42	0.00	0.00	1281.73	0.151	0.18	3.307	A
1	WBOFF	192.68	192.53	193.42	0.00	1321.00	0.146	0.17	3.189	A
1	A5S	133.22	133.11	199.12	0.00	1116.72	0.119	0.13	3.659	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	430.50	429.97	71.51	0.00	1260.06	0.342	0.52	4.334	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	257.43	257.20	0.00	0.00	1220.34	0.211	0.27	3.737	A
2	EBOFF	78.17	78.11	257.20	0.00	1183.81	0.066	0.07	3.255	A

Main results: (08:30-08:45)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	193.78	193.77	0.00	0.00	1281.73	0.151	0.18	3.308	A
1	WBOFF	192.68	192.68	193.77	0.00	1320.83	0.146	0.17	3.190	A
1	A5S	133.22	133.22	199.28	0.00	1116.64	0.119	0.14	3.659	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	430.50	430.49	71.57	0.00	1260.03	0.342	0.52	4.339	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	257.64	257.63	0.00	0.00	1220.34	0.211	0.27	3.738	A
2	EBOFF	78.17	78.17	257.63	0.00	1183.59	0.066	0.07	3.255	A

Main results: (08:45-09:00)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	158.43	158.57	0.00	0.00	1281.73	0.124	0.14	3.207	A
1	WBOFF	157.32	157.47	158.57	0.00	1338.36	0.118	0.13	3.048	A
1	A5S	108.78	108.89	162.88	0.00	1133.64	0.096	0.11	3.512	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	351.50	352.02	58.49	0.00	1266.40	0.278	0.39	3.940	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	210.56	210.79	0.00	0.00	1220.34	0.173	0.21	3.568	A
2	EBOFF	63.83	63.89	210.79	0.00	1206.74	0.053	0.06	3.151	A

Main results: (09:00-09:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	132.64	132.74	0.00	0.00	1281.73	0.103	0.12	3.132	A
1	WBOFF	131.75	131.85	132.74	0.00	1351.22	0.098	0.11	2.954	A
1	A5S	91.10	91.17	136.38	0.00	1146.01	0.079	0.09	3.412	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	294.37	294.70	48.98	0.00	1271.03	0.232	0.30	3.687	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	176.31	176.47	0.00	0.00	1220.34	0.144	0.17	3.451	A
2	EBOFF	53.45	53.49	176.47	0.00	1223.70	0.044	0.05	3.075	A

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction 1 - Arm A5N	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 2 - Arm A5S	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, PM	2017 Base	PM		Varies by Arm	16:15	17:45	90	15		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	1	A55 J3 W/B	Roundabout	A5N,WBOFF,A5S,WBON			3.50	A
2	2	A55 J3 E/B	Roundabout	A5N,EBON,A5S,EBOFF			3.99	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description
1	A5N	A5N	(untitled)	
1	WBOFF	WBOFF	(untitled)	
1	A5S	A5S	(untitled)	
1	WBON	WBON	(untitled)	
2	A5N	A5N	(untitled)	
2	EBON	EBON	(untitled)	
2	A5S	A5S	(untitled)	
2	EBOFF	EBOFF	(untitled)	

Capacity Options

Junction	Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	A5N	0.00	99999.00
1	WBOFF	0.00	99999.00
1	A5S	0.00	99999.00
1	WBON	0.00	99999.00
2	A5N	0.00	99999.00
2	EBON	0.00	99999.00
2	A5S	0.00	99999.00
2	EBOFF	0.00	99999.00

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	A5N	3.61	5.07	5.16	12.98	60.04	32.00	
1	WBOFF	4.86	4.86	0.00	14.16	60.04	35.00	
1	A5S	3.20	5.13	5.06	13.73	60.04	29.00	
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	A5N	3.89	4.59	5.75	13.42	58.41	31.00	
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	A5S	3.65	4.83	2.59	17.17	58.41	35.00	
2	EBOFF	4.38	4.38	0.00	19.28	58.41	33.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	A5N		(calculated)	(calculated)	0.476	1281.728
1	WBOFF		(calculated)	(calculated)	0.498	1417.332
1	A5S		(calculated)	(calculated)	0.467	1209.699
1	WBON		(calculated)	(calculated)	Exit-only	Exit-only
2	A5N		(calculated)	(calculated)	0.487	1294.899
2	EBON		(calculated)	(calculated)	Exit-only	Exit-only
2	A5S		(calculated)	(calculated)	0.475	1220.336
2	EBOFF		(calculated)	(calculated)	0.494	1310.901

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	A5N	Linked Arm		N/A	
1	WBOFF	ONE HOUR	✓	263.00	100.000
1	A5S	ONE HOUR	✓	153.00	100.000
1	WBON	Exit-only	✓	Exit-only	Exit-only
2	A5N	ONE HOUR	✓	270.00	100.000
2	EBON	Exit-only	✓	Exit-only	Exit-only
2	A5S	Linked Arm		N/A	
2	EBOFF	ONE HOUR	✓	64.00	100.000

Linked Arm Data

Junction	Arm	From Junction ID	From Arm ID	Link Type	Flow Source	Uniform Flow (PCU/hr)	Flow Multiplier (%)	Internal Storage Space (PCU)
1	A5N	2	A5S	Simple (vertical queueing)	Normal	0.00	100.00	
2	A5S	1	A5N	Simple (vertical queueing)	Normal	0.00	100.00	

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.000	0.000	93.000	19.000
	WBOFF	258.000	0.000	5.000	0.000
	A5S	89.000	0.000	0.000	64.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.00	0.00	0.83	0.17
	WBOFF	0.98	0.00	0.02	0.00
	A5S	0.58	0.00	0.00	0.42
	WBON	0.25	0.25	0.25	0.25

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Counts / Proportions (PCU/hr) - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	0.000	197.000	73.000	0.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	96.000	6.000	0.000	0.000
	EBOFF	25.000	0.000	39.000	0.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	0.00	0.73	0.27	0.00
	EBON	0.25	0.25	0.25	0.25
	A5S	0.94	0.06	0.00	0.00
	EBOFF	0.39	0.00	0.61	0.00

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	1.000	1.000	1.000	1.000
	WBOFF	1.000	1.000	1.000	1.000
	A5S	1.000	1.000	1.000	1.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.0	0.0	0.0	0.0
	WBOFF	0.0	0.0	0.0	0.0
	A5S	0.0	0.0	0.0	0.0
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Average PCU Per Vehicle - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	1.000	1.000	1.000	1.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	1.000	1.000	1.000	1.000
	EBOFF	1.000	1.000	1.000	1.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	0.0	0.0	0.0	0.0
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	0.0	0.0	0.0	0.0
	EBOFF	0.0	0.0	0.0	0.0

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	A5N	0.10	3.11	0.11	A
1	WBOFF	0.21	3.37	0.27	A
1	A5S	0.16	4.00	0.19	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	0.24	3.73	0.31	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.31	4.29	0.45	A
2	EBOFF	0.06	3.42	0.07	A

Main Results for each time segment

Main results: (16:15-16:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	84.01	83.73	0.00	0.00	1281.73	0.066	0.07	3.005	A
1	WBOFF	198.00	197.33	83.73	0.00	1375.63	0.144	0.17	3.053	A
1	A5S	115.19	114.73	207.78	0.00	1112.67	0.104	0.11	3.605	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	203.27	202.51	44.51	0.00	1273.21	0.160	0.19	3.361	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	260.32	259.24	0.00	0.00	1220.34	0.213	0.27	3.743	A
2	EBOFF	48.18	48.01	259.24	0.00	1182.80	0.041	0.04	3.172	A

Main results: (16:30-16:45)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	100.61	100.55	0.00	0.00	1281.73	0.079	0.08	3.047	A
1	WBOFF	236.43	236.27	100.55	0.00	1367.25	0.173	0.21	3.182	A
1	A5S	137.54	137.43	248.83	0.00	1093.50	0.126	0.14	3.764	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	242.72	242.54	53.36	0.00	1268.90	0.191	0.24	3.507	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	311.72	311.43	0.00	0.00	1220.34	0.255	0.34	3.960	A
2	EBOFF	57.53	57.50	311.43	0.00	1157.01	0.050	0.05	3.273	A

Main results: (16:45-17:00)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	123.20	123.12	0.00	0.00	1281.73	0.096	0.11	3.106	A
1	WBOFF	289.57	289.32	123.12	0.00	1356.02	0.214	0.27	3.374	A
1	A5S	168.46	168.28	304.71	0.00	1067.41	0.158	0.19	4.004	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	297.28	296.99	65.33	0.00	1263.06	0.235	0.31	3.726	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	381.71	381.27	0.00	0.00	1220.34	0.313	0.45	4.289	A
2	EBOFF	70.47	70.41	381.27	0.00	1122.50	0.063	0.07	3.421	A

Main results: (17:00-17:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	123.31	123.31	0.00	0.00	1281.73	0.096	0.11	3.106	A
1	WBOFF	289.57	289.57	123.31	0.00	1355.92	0.214	0.27	3.375	A
1	A5S	168.46	168.45	304.98	0.00	1067.29	0.158	0.19	4.004	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	297.28	297.27	65.41	0.00	1263.03	0.235	0.31	3.726	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	382.05	382.04	0.00	0.00	1220.34	0.313	0.45	4.294	A
2	EBOFF	70.47	70.46	382.04	0.00	1122.12	0.063	0.07	3.422	A

Main results: (17:15-17:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	100.80	100.88	0.00	0.00	1281.73	0.079	0.09	3.050	A
1	WBOFF	236.43	236.68	100.88	0.00	1367.09	0.173	0.21	3.187	A
1	A5S	137.54	137.71	249.29	0.00	1093.29	0.126	0.14	3.767	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	242.72	243.00	53.49	0.00	1268.83	0.191	0.24	3.509	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	312.28	312.72	0.00	0.00	1220.34	0.256	0.35	3.969	A
2	EBOFF	57.53	57.59	312.72	0.00	1156.38	0.050	0.05	3.278	A

Main results: (17:30-17:45)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	84.39	84.45	0.00	0.00	1281.73	0.066	0.07	3.006	A
1	WBOFF	198.00	198.16	84.45	0.00	1375.27	0.144	0.17	3.060	A
1	A5S	115.19	115.30	208.72	0.00	1112.23	0.104	0.12	3.610	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	203.27	203.46	44.78	0.00	1273.08	0.160	0.19	3.368	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	261.47	261.75	0.00	0.00	1220.34	0.214	0.27	3.758	A
2	EBOFF	48.18	48.22	261.75	0.00	1181.56	0.041	0.04	3.178	A

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction 1 - Arm A5N	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 2 - Arm A5S	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, AM	2023 Base	AM		Varies by Arm	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	1	A55 J3 W/B	Roundabout	A5N,WBOFF,A5S,WBON			3.40	A
2	2	A55 J3 E/B	Roundabout	A5N,EBON,A5S,EBOFF			4.13	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description
1	A5N	A5N	(untitled)	
1	WBOFF	WBOFF	(untitled)	
1	A5S	A5S	(untitled)	
1	WBON	WBON	(untitled)	
2	A5N	A5N	(untitled)	
2	EBON	EBON	(untitled)	
2	A5S	A5S	(untitled)	
2	EBOFF	EBOFF	(untitled)	

Capacity Options

Junction	Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	A5N	0.00	99999.00
1	WBOFF	0.00	99999.00
1	A5S	0.00	99999.00
1	WBON	0.00	99999.00
2	A5N	0.00	99999.00
2	EBON	0.00	99999.00
2	A5S	0.00	99999.00
2	EBOFF	0.00	99999.00

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	A5N	3.61	5.07	5.16	12.98	60.04	32.00	
1	WBOFF	4.86	4.86	0.00	14.16	60.04	35.00	
1	A5S	3.20	5.13	5.06	13.73	60.04	29.00	
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	A5N	3.89	4.59	5.75	13.42	58.41	31.00	
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	A5S	3.65	4.83	2.59	17.17	58.41	35.00	
2	EBOFF	4.38	4.38	0.00	19.28	58.41	33.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	A5N		(calculated)	(calculated)	0.476	1281.728
1	WBOFF		(calculated)	(calculated)	0.498	1417.332
1	A5S		(calculated)	(calculated)	0.467	1209.699
1	WBON		(calculated)	(calculated)	Exit-only	Exit-only
2	A5N		(calculated)	(calculated)	0.487	1294.899
2	EBON		(calculated)	(calculated)	Exit-only	Exit-only
2	A5S		(calculated)	(calculated)	0.475	1220.336
2	EBOFF		(calculated)	(calculated)	0.494	1310.901

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	A5N	Linked Arm		N/A	
1	WBOFF	ONE HOUR	✓	186.00	100.000
1	A5S	ONE HOUR	✓	128.00	100.000
1	WBON	Exit-only	✓	Exit-only	Exit-only
2	A5N	ONE HOUR	✓	414.00	100.000
2	EBON	Exit-only	✓	Exit-only	Exit-only
2	A5S	Linked Arm		N/A	
2	EBOFF	ONE HOUR	✓	75.00	100.000

Linked Arm Data

Junction	Arm	From Junction ID	From Arm ID	Link Type	Flow Source	Uniform Flow (PCU/hr)	Flow Multiplier (%)	Internal Storage Space (PCU)
1	A5N	2	A5S	Simple (vertical queueing)	Normal	0.00	100.00	
2	A5S	1	A5N	Simple (vertical queueing)	Normal	0.00	100.00	

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.000	0.000	175.000	12.000
	WBOFF	180.000	0.000	6.000	0.000
	A5S	68.000	0.000	0.000	60.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.00	0.00	0.94	0.06
	WBOFF	0.97	0.00	0.03	0.00
	A5S	0.53	0.00	0.00	0.47
	WBON	0.25	0.25	0.25	0.25

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Counts / Proportions (PCU/hr) - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	0.000	290.000	124.000	0.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	241.000	6.000	0.000	0.000
	EBOFF	13.000	0.000	62.000	0.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	0.00	0.70	0.30	0.00
	EBON	0.25	0.25	0.25	0.25
	A5S	0.98	0.02	0.00	0.00
	EBOFF	0.17	0.00	0.83	0.00

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	1.000	1.000	1.000	1.000
	WBOFF	1.000	1.000	1.000	1.000
	A5S	1.000	1.000	1.000	1.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.0	0.0	0.0	0.0
	WBOFF	0.0	0.0	0.0	0.0
	A5S	0.0	0.0	0.0	0.0
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Average PCU Per Vehicle - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	1.000	1.000	1.000	1.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	1.000	1.000	1.000	1.000
	EBOFF	1.000	1.000	1.000	1.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	0.0	0.0	0.0	0.0
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	0.0	0.0	0.0	0.0
	EBOFF	0.0	0.0	0.0	0.0

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	A5N	0.16	3.34	0.19	A
1	WBOFF	0.16	3.24	0.18	A
1	A5S	0.13	3.71	0.14	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	0.36	4.48	0.57	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.22	3.80	0.29	A
2	EBOFF	0.07	3.29	0.08	A

Main Results for each time segment

Main results: (07:45-08:00)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	139.48	139.00	0.00	0.00	1281.73	0.109	0.12	3.148	A
1	WBOFF	140.03	139.57	139.00	0.00	1348.11	0.104	0.12	2.979	A
1	A5S	96.37	96.00	143.99	0.00	1142.46	0.084	0.09	3.440	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	311.68	310.39	51.02	0.00	1270.04	0.245	0.32	3.746	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	186.07	185.35	0.00	0.00	1220.34	0.152	0.18	3.477	A
2	EBOFF	56.46	56.27	185.35	0.00	1219.31	0.046	0.05	3.095	A

Main results: (08:00-08:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	167.07	166.95	0.00	0.00	1281.73	0.130	0.15	3.228	A
1	WBOFF	167.21	167.10	166.95	0.00	1334.18	0.125	0.14	3.084	A
1	A5S	115.07	114.98	172.42	0.00	1129.18	0.102	0.11	3.549	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	372.18	371.81	61.11	0.00	1265.12	0.294	0.41	4.028	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	222.80	222.62	0.00	0.00	1220.34	0.183	0.22	3.607	A
2	EBOFF	67.42	67.38	222.62	0.00	1200.89	0.056	0.06	3.175	A

Main results: (08:15-08:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	204.56	204.40	0.00	0.00	1281.73	0.160	0.19	3.341	A
1	WBOFF	204.79	204.63	204.40	0.00	1315.54	0.156	0.18	3.240	A
1	A5S	140.93	140.80	211.14	0.00	1111.10	0.127	0.14	3.709	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	455.82	455.22	74.83	0.00	1258.44	0.362	0.56	4.479	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	272.83	272.57	0.00	0.00	1220.34	0.224	0.29	3.798	A
2	EBOFF	82.58	82.51	272.57	0.00	1176.21	0.070	0.08	3.290	A

Main results: (08:30-08:45)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	204.79	204.78	0.00	0.00	1281.73	0.160	0.19	3.342	A
1	WBOFF	204.79	204.79	204.78	0.00	1315.34	0.156	0.18	3.240	A
1	A5S	140.93	140.93	211.32	0.00	1111.02	0.127	0.14	3.710	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	455.82	455.81	74.90	0.00	1258.40	0.362	0.57	4.485	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	273.05	273.05	0.00	0.00	1220.34	0.224	0.29	3.799	A
2	EBOFF	82.58	82.58	273.05	0.00	1175.98	0.070	0.08	3.291	A

Main results: (08:45-09:00)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	167.44	167.59	0.00	0.00	1281.73	0.131	0.15	3.233	A
1	WBOFF	167.21	167.37	167.59	0.00	1333.87	0.125	0.14	3.088	A
1	A5S	115.07	115.19	172.73	0.00	1129.04	0.102	0.11	3.550	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	372.18	372.76	61.22	0.00	1265.07	0.294	0.42	4.038	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	223.17	223.42	0.00	0.00	1220.34	0.183	0.22	3.613	A
2	EBOFF	67.42	67.49	223.42	0.00	1200.50	0.056	0.06	3.176	A

Main results: (09:00-09:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	140.18	140.29	0.00	0.00	1281.73	0.109	0.12	3.153	A
1	WBOFF	140.03	140.14	140.29	0.00	1347.46	0.104	0.12	2.983	A
1	A5S	96.37	96.45	144.62	0.00	1142.17	0.084	0.09	3.444	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	311.68	312.05	51.26	0.00	1269.92	0.245	0.33	3.758	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	186.86	187.03	0.00	0.00	1220.34	0.153	0.18	3.483	A
2	EBOFF	56.46	56.51	187.03	0.00	1218.48	0.046	0.05	3.097	A

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction 1 - Arm A5N	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 2 - Arm A5S	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, PM	2023 Base	PM		Varies by Arm	16:15	17:45	90	15		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	1	A55 J3 W/B	Roundabout	A5N,WBOFF,A5S,WBON			3.56	A
2	2	A55 J3 E/B	Roundabout	A5N,EBON,A5S,EBOFF			4.08	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description
1	A5N	A5N	(untitled)	
1	WBOFF	WBOFF	(untitled)	
1	A5S	A5S	(untitled)	
1	WBON	WBON	(untitled)	
2	A5N	A5N	(untitled)	
2	EBON	EBON	(untitled)	
2	A5S	A5S	(untitled)	
2	EBOFF	EBOFF	(untitled)	

Capacity Options

Junction	Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	A5N	0.00	99999.00
1	WBOFF	0.00	99999.00
1	A5S	0.00	99999.00
1	WBON	0.00	99999.00
2	A5N	0.00	99999.00
2	EBON	0.00	99999.00
2	A5S	0.00	99999.00
2	EBOFF	0.00	99999.00

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	A5N	3.61	5.07	5.16	12.98	60.04	32.00	
1	WBOFF	4.86	4.86	0.00	14.16	60.04	35.00	
1	A5S	3.20	5.13	5.06	13.73	60.04	29.00	
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	A5N	3.89	4.59	5.75	13.42	58.41	31.00	
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	A5S	3.65	4.83	2.59	17.17	58.41	35.00	
2	EBOFF	4.38	4.38	0.00	19.28	58.41	33.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	A5N		(calculated)	(calculated)	0.476	1281.728
1	WBOFF		(calculated)	(calculated)	0.498	1417.332
1	A5S		(calculated)	(calculated)	0.467	1209.699
1	WBON		(calculated)	(calculated)	Exit-only	Exit-only
2	A5N		(calculated)	(calculated)	0.487	1294.899
2	EBON		(calculated)	(calculated)	Exit-only	Exit-only
2	A5S		(calculated)	(calculated)	0.475	1220.336
2	EBOFF		(calculated)	(calculated)	0.494	1310.901

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	A5N	Linked Arm		N/A	
1	WBOFF	ONE HOUR	✓	278.00	100.000
1	A5S	ONE HOUR	✓	161.00	100.000
1	WBON	Exit-only	✓	Exit-only	Exit-only
2	A5N	ONE HOUR	✓	284.00	100.000
2	EBON	Exit-only	✓	Exit-only	Exit-only
2	A5S	Linked Arm		N/A	
2	EBOFF	ONE HOUR	✓	68.00	100.000

Linked Arm Data

Junction	Arm	From Junction ID	From Arm ID	Link Type	Flow Source	Uniform Flow (PCU/hr)	Flow Multiplier (%)	Internal Storage Space (PCU)
1	A5N	2	A5S	Simple (vertical queueing)	Normal	0.00	100.00	
2	A5S	1	A5N	Simple (vertical queueing)	Normal	0.00	100.00	

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.000	0.000	98.000	20.000
	WBOFF	273.000	0.000	5.000	0.000
	A5S	94.000	0.000	0.000	67.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.00	0.00	0.83	0.17
	WBOFF	0.98	0.00	0.02	0.00
	A5S	0.58	0.00	0.00	0.42
	WBON	0.25	0.25	0.25	0.25

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Counts / Proportions (PCU/hr) - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	0.000	207.000	77.000	0.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	101.000	7.000	0.000	0.000
	EBOFF	27.000	0.000	41.000	0.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	0.00	0.73	0.27	0.00
	EBON	0.25	0.25	0.25	0.25
	A5S	0.94	0.06	0.00	0.00
	EBOFF	0.40	0.00	0.60	0.00

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	1.000	1.000	1.000	1.000
	WBOFF	1.000	1.000	1.000	1.000
	A5S	1.000	1.000	1.000	1.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.0	0.0	0.0	0.0
	WBOFF	0.0	0.0	0.0	0.0
	A5S	0.0	0.0	0.0	0.0
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Average PCU Per Vehicle - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	1.000	1.000	1.000	1.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	1.000	1.000	1.000	1.000
	EBOFF	1.000	1.000	1.000	1.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	0.0	0.0	0.0	0.0
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	0.0	0.0	0.0	0.0
	EBOFF	0.0	0.0	0.0	0.0

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	A5N	0.10	3.12	0.11	A
1	WBOFF	0.23	3.44	0.29	A
1	A5S	0.17	4.08	0.20	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	0.25	3.80	0.33	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.33	4.41	0.49	A
2	EBOFF	0.07	3.47	0.07	A

Main Results for each time segment

Main results: (16:15-16:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	88.51	88.21	0.00	0.00	1281.73	0.069	0.07	3.016	A
1	WBOFF	209.29	208.58	88.21	0.00	1373.40	0.152	0.18	3.089	A
1	A5S	121.21	120.72	219.78	0.00	1107.07	0.109	0.12	3.647	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	213.81	213.00	48.53	0.00	1271.25	0.168	0.20	3.400	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	275.31	274.15	0.00	0.00	1220.34	0.226	0.29	3.799	A
2	EBOFF	51.19	51.01	274.15	0.00	1175.43	0.044	0.05	3.201	A

Main results: (16:30-16:45)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	106.00	105.94	0.00	0.00	1281.73	0.083	0.09	3.061	A
1	WBOFF	249.92	249.74	105.94	0.00	1364.57	0.183	0.22	3.228	A
1	A5S	144.74	144.61	263.20	0.00	1086.79	0.133	0.15	3.820	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	255.31	255.11	58.18	0.00	1266.55	0.202	0.25	3.559	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	329.68	329.37	0.00	0.00	1220.34	0.270	0.37	4.040	A
2	EBOFF	61.13	61.09	329.37	0.00	1148.15	0.053	0.06	3.311	A

Main results: (16:45-17:00)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	129.80	129.71	0.00	0.00	1281.73	0.101	0.11	3.124	A
1	WBOFF	306.08	305.81	129.71	0.00	1352.73	0.226	0.29	3.438	A
1	A5S	177.26	177.08	322.30	0.00	1059.20	0.167	0.20	4.080	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	312.69	312.38	71.24	0.00	1260.19	0.248	0.33	3.798	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	403.70	403.21	0.00	0.00	1220.34	0.331	0.49	4.402	A
2	EBOFF	74.87	74.81	403.21	0.00	1111.66	0.067	0.07	3.471	A

Main results: (17:00-17:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	129.92	129.92	0.00	0.00	1281.73	0.101	0.11	3.124	A
1	WBOFF	306.08	306.08	129.92	0.00	1352.63	0.226	0.29	3.439	A
1	A5S	177.26	177.26	322.60	0.00	1059.06	0.167	0.20	4.082	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	312.69	312.69	71.33	0.00	1260.14	0.248	0.33	3.798	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	404.07	404.06	0.00	0.00	1220.34	0.331	0.49	4.409	A
2	EBOFF	74.87	74.87	404.06	0.00	1111.24	0.067	0.07	3.472	A

Main results: (17:15-17:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	106.20	106.29	0.00	0.00	1281.73	0.083	0.09	3.062	A
1	WBOFF	249.92	250.18	106.29	0.00	1364.40	0.183	0.23	3.233	A
1	A5S	144.74	144.92	263.70	0.00	1086.56	0.133	0.15	3.825	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	255.31	255.61	58.33	0.00	1266.47	0.202	0.25	3.564	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	330.29	330.77	0.00	0.00	1220.34	0.271	0.37	4.048	A
2	EBOFF	61.13	61.19	330.77	0.00	1147.45	0.053	0.06	3.313	A

Main results: (17:30-17:45)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	88.92	88.98	0.00	0.00	1281.73	0.069	0.07	3.020	A
1	WBOFF	209.29	209.47	88.98	0.00	1373.02	0.152	0.18	3.093	A
1	A5S	121.21	121.33	220.79	0.00	1106.60	0.110	0.12	3.656	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	213.81	214.01	48.84	0.00	1271.10	0.168	0.20	3.408	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	276.54	276.86	0.00	0.00	1220.34	0.227	0.29	3.815	A
2	EBOFF	51.19	51.24	276.86	0.00	1174.09	0.044	0.05	3.205	A

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction 1 - Arm A5N	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 2 - Arm A5S	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, AM	2023 Base + Dev	AM		Varies by Arm	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	1	A55 J3 W/B	Roundabout	A5N,WBOFF,A5S,WBON			3.59	A
2	2	A55 J3 E/B	Roundabout	A5N,EBON,A5S,EBOFF			4.73	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description
1	A5N	A5N	(untitled)	
1	WBOFF	WBOFF	(untitled)	
1	A5S	A5S	(untitled)	
1	WBON	WBON	(untitled)	
2	A5N	A5N	(untitled)	
2	EBON	EBON	(untitled)	
2	A5S	A5S	(untitled)	
2	EBOFF	EBOFF	(untitled)	

Capacity Options

Junction	Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	A5N	0.00	99999.00
1	WBOFF	0.00	99999.00
1	A5S	0.00	99999.00
1	WBON	0.00	99999.00
2	A5N	0.00	99999.00
2	EBON	0.00	99999.00
2	A5S	0.00	99999.00
2	EBOFF	0.00	99999.00

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	A5N	3.61	5.07	5.16	12.98	60.04	32.00	
1	WBOFF	4.86	4.86	0.00	14.16	60.04	35.00	
1	A5S	3.20	5.13	5.06	13.73	60.04	29.00	
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	A5N	3.89	4.59	5.75	13.42	58.41	31.00	
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	A5S	3.65	4.83	2.59	17.17	58.41	35.00	
2	EBOFF	4.38	4.38	0.00	19.28	58.41	33.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	A5N		(calculated)	(calculated)	0.476	1281.728
1	WBOFF		(calculated)	(calculated)	0.498	1417.332
1	A5S		(calculated)	(calculated)	0.467	1209.699
1	WBON		(calculated)	(calculated)	Exit-only	Exit-only
2	A5N		(calculated)	(calculated)	0.487	1294.899
2	EBON		(calculated)	(calculated)	Exit-only	Exit-only
2	A5S		(calculated)	(calculated)	0.475	1220.336
2	EBOFF		(calculated)	(calculated)	0.494	1310.901

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	A5N	Linked Arm		N/A	
1	WBOFF	ONE HOUR	✓	287.00	100.000
1	A5S	ONE HOUR	✓	128.00	100.000
1	WBON	Exit-only	✓	Exit-only	Exit-only
2	A5N	ONE HOUR	✓	514.00	100.000
2	EBON	Exit-only	✓	Exit-only	Exit-only
2	A5S	Linked Arm		N/A	
2	EBOFF	ONE HOUR	✓	75.00	100.000

Linked Arm Data

Junction	Arm	From Junction ID	From Arm ID	Link Type	Flow Source	Uniform Flow (PCU/hr)	Flow Multiplier (%)	Internal Storage Space (PCU)
1	A5N	2	A5S	Simple (vertical queueing)	Normal	0.00	100.00	
2	A5S	1	A5N	Simple (vertical queueing)	Normal	0.00	100.00	

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.000	0.000	175.000	12.000
	WBOFF	281.000	0.000	6.000	0.000
	A5S	68.000	0.000	0.000	60.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.00	0.00	0.94	0.06
	WBOFF	0.98	0.00	0.02	0.00
	A5S	0.53	0.00	0.00	0.47
	WBON	0.25	0.25	0.25	0.25

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Counts / Proportions (PCU/hr) - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	0.000	390.000	124.000	0.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	342.000	6.000	0.000	0.000
	EBOFF	13.000	0.000	62.000	0.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	0.00	0.76	0.24	0.00
	EBON	0.25	0.25	0.25	0.25
	A5S	0.98	0.02	0.00	0.00
	EBOFF	0.17	0.00	0.83	0.00

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	1.000	1.000	1.000	1.000
	WBOFF	1.000	1.000	1.000	1.000
	A5S	1.000	1.000	1.000	1.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.0	0.0	0.0	0.0
	WBOFF	0.0	0.0	0.0	0.0
	A5S	0.0	0.0	0.0	0.0
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Average PCU Per Vehicle - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	1.000	1.000	1.000	1.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	1.000	1.000	1.000	1.000
	EBOFF	1.000	1.000	1.000	1.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	0.0	0.0	0.0	0.0
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	0.0	0.0	0.0	0.0
	EBOFF	0.0	0.0	0.0	0.0

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	A5N	0.16	3.34	0.19	A
1	WBOFF	0.24	3.60	0.32	A
1	A5S	0.13	3.92	0.15	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	0.45	5.20	0.81	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.31	4.30	0.46	A
2	EBOFF	0.07	3.47	0.08	A

Main Results for each time segment

Main results: (07:45-08:00)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	139.45	138.96	0.00	0.00	1281.73	0.109	0.12	3.148	A
1	WBOFF	216.07	215.31	138.96	0.00	1348.13	0.160	0.19	3.176	A
1	A5S	96.37	95.99	219.72	0.00	1107.10	0.087	0.09	3.560	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	386.97	385.22	51.01	0.00	1270.04	0.305	0.44	4.062	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	261.80	260.71	0.00	0.00	1220.34	0.215	0.27	3.748	A
2	EBOFF	56.46	56.26	260.71	0.00	1182.07	0.048	0.05	3.197	A

Main results: (08:00-08:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	167.04	166.93	0.00	0.00	1281.73	0.130	0.15	3.228	A
1	WBOFF	258.01	257.81	166.93	0.00	1334.20	0.193	0.24	3.344	A
1	A5S	115.07	114.98	263.13	0.00	1086.83	0.106	0.12	3.703	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	462.08	461.53	61.10	0.00	1265.13	0.365	0.57	4.477	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	313.50	313.22	0.00	0.00	1220.34	0.257	0.34	3.968	A
2	EBOFF	67.42	67.38	313.22	0.00	1156.13	0.058	0.06	3.305	A

Main results: (08:15-08:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	204.50	204.34	0.00	0.00	1281.73	0.160	0.19	3.341	A
1	WBOFF	315.99	315.69	204.34	0.00	1315.56	0.240	0.31	3.600	A
1	A5S	140.93	140.79	322.20	0.00	1059.24	0.133	0.15	3.919	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	565.92	564.97	74.82	0.00	1258.44	0.450	0.81	5.183	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	383.89	383.44	0.00	0.00	1220.34	0.315	0.46	4.300	A
2	EBOFF	82.58	82.51	383.44	0.00	1121.43	0.074	0.08	3.464	A

Main results: (08:30-08:45)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	204.79	204.78	0.00	0.00	1281.73	0.160	0.19	3.341	A
1	WBOFF	315.99	315.99	204.78	0.00	1315.34	0.240	0.32	3.601	A
1	A5S	140.93	140.93	322.52	0.00	1059.09	0.133	0.15	3.920	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	565.92	565.91	74.89	0.00	1258.41	0.450	0.81	5.198	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	384.25	384.24	0.00	0.00	1220.34	0.315	0.46	4.305	A
2	EBOFF	82.58	82.58	384.24	0.00	1121.03	0.074	0.08	3.465	A

Main results: (08:45-09:00)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	167.49	167.65	0.00	0.00	1281.73	0.131	0.15	3.233	A
1	WBOFF	258.01	258.30	167.65	0.00	1333.84	0.193	0.24	3.347	A
1	A5S	115.07	115.21	263.66	0.00	1086.58	0.106	0.12	3.708	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	462.08	463.01	61.22	0.00	1265.07	0.365	0.58	4.495	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	314.11	314.54	0.00	0.00	1220.34	0.257	0.35	3.976	A
2	EBOFF	67.42	67.49	314.54	0.00	1155.47	0.058	0.06	3.310	A

Main results: (09:00-09:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	140.20	140.31	0.00	0.00	1281.73	0.109	0.12	3.156	A
1	WBOFF	216.07	216.27	140.31	0.00	1347.45	0.160	0.19	3.184	A
1	A5S	96.37	96.46	220.75	0.00	1106.62	0.087	0.10	3.566	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	386.97	387.52	51.26	0.00	1269.92	0.305	0.44	4.082	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	262.99	263.28	0.00	0.00	1220.34	0.216	0.28	3.761	A
2	EBOFF	56.46	56.51	263.28	0.00	1180.81	0.048	0.05	3.201	A

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction 1 - Arm A5N	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 2 - Arm A5S	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, PM	2023 Base + Dev	PM		Varies by Arm	16:15	17:45	90	15		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	1	A55 J3 W/B	Roundabout	A5N,WBOFF,A5S,WBON			3.84	A
2	2	A55 J3 E/B	Roundabout	A5N,EBON,A5S,EBOFF			4.66	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description
1	A5N	A5N	(untitled)	
1	WBOFF	WBOFF	(untitled)	
1	A5S	A5S	(untitled)	
1	WBON	WBON	(untitled)	
2	A5N	A5N	(untitled)	
2	EBON	EBON	(untitled)	
2	A5S	A5S	(untitled)	
2	EBOFF	EBOFF	(untitled)	

Capacity Options

Junction	Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	A5N	0.00	99999.00
1	WBOFF	0.00	99999.00
1	A5S	0.00	99999.00
1	WBON	0.00	99999.00
2	A5N	0.00	99999.00
2	EBON	0.00	99999.00
2	A5S	0.00	99999.00
2	EBOFF	0.00	99999.00

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	A5N	3.61	5.07	5.16	12.98	60.04	32.00	
1	WBOFF	4.86	4.86	0.00	14.16	60.04	35.00	
1	A5S	3.20	5.13	5.06	13.73	60.04	29.00	
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	A5N	3.89	4.59	5.75	13.42	58.41	31.00	
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	A5S	3.65	4.83	2.59	17.17	58.41	35.00	
2	EBOFF	4.38	4.38	0.00	19.28	58.41	33.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	A5N		(calculated)	(calculated)	0.476	1281.728
1	WBOFF		(calculated)	(calculated)	0.498	1417.332
1	A5S		(calculated)	(calculated)	0.467	1209.699
1	WBON		(calculated)	(calculated)	Exit-only	Exit-only
2	A5N		(calculated)	(calculated)	0.487	1294.899
2	EBON		(calculated)	(calculated)	Exit-only	Exit-only
2	A5S		(calculated)	(calculated)	0.475	1220.336
2	EBOFF		(calculated)	(calculated)	0.494	1310.901

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	A5N	Linked Arm		N/A	
1	WBOFF	ONE HOUR	✓	379.00	100.000
1	A5S	ONE HOUR	✓	161.00	100.000
1	WBON	Exit-only	✓	Exit-only	Exit-only
2	A5N	ONE HOUR	✓	386.00	100.000
2	EBON	Exit-only	✓	Exit-only	Exit-only
2	A5S	Linked Arm		N/A	
2	EBOFF	ONE HOUR	✓	68.00	100.000

Linked Arm Data

Junction	Arm	From Junction ID	From Arm ID	Link Type	Flow Source	Uniform Flow (PCU/hr)	Flow Multiplier (%)	Internal Storage Space (PCU)
1	A5N	2	A5S	Simple (vertical queueing)	Normal	0.00	100.00	
2	A5S	1	A5N	Simple (vertical queueing)	Normal	0.00	100.00	

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.000	0.000	98.000	20.000
	WBOFF	374.000	0.000	5.000	0.000
	A5S	94.000	0.000	0.000	67.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.00	0.00	0.83	0.17
	WBOFF	0.99	0.00	0.01	0.00
	A5S	0.58	0.00	0.00	0.42
	WBON	0.25	0.25	0.25	0.25

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Counts / Proportions (PCU/hr) - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	0.000	309.000	77.000	0.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	202.000	7.000	0.000	0.000
	EBOFF	27.000	0.000	41.000	0.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	0.00	0.80	0.20	0.00
	EBON	0.25	0.25	0.25	0.25
	A5S	0.97	0.03	0.00	0.00
	EBOFF	0.40	0.00	0.60	0.00

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	1.000	1.000	1.000	1.000
	WBOFF	1.000	1.000	1.000	1.000
	A5S	1.000	1.000	1.000	1.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.0	0.0	0.0	0.0
	WBOFF	0.0	0.0	0.0	0.0
	A5S	0.0	0.0	0.0	0.0
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Average PCU Per Vehicle - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	1.000	1.000	1.000	1.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	1.000	1.000	1.000	1.000
	EBOFF	1.000	1.000	1.000	1.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	0.0	0.0	0.0	0.0
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	0.0	0.0	0.0	0.0
	EBOFF	0.0	0.0	0.0	0.0

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	A5N	0.10	3.12	0.11	A
1	WBOFF	0.31	3.85	0.44	A
1	A5S	0.18	4.34	0.21	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	0.34	4.29	0.50	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.42	5.10	0.73	A
2	EBOFF	0.07	3.67	0.08	A

Main Results for each time segment

Main results: (16:15-16:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	88.49	88.19	0.00	0.00	1281.73	0.069	0.07	3.016	A
1	WBOFF	285.33	284.29	88.19	0.00	1373.41	0.208	0.26	3.302	A
1	A5S	121.21	120.70	295.48	0.00	1071.72	0.113	0.13	3.783	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	290.60	289.43	42.46	0.00	1274.21	0.228	0.29	3.650	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	351.01	349.40	0.00	0.00	1220.34	0.288	0.40	4.126	A
2	EBOFF	51.19	51.01	349.40	0.00	1138.25	0.045	0.05	3.310	A

Main results: (16:30-16:45)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	105.99	105.92	0.00	0.00	1281.73	0.083	0.09	3.061	A
1	WBOFF	340.71	340.43	105.92	0.00	1364.58	0.250	0.33	3.515	A
1	A5S	144.74	144.60	353.90	0.00	1044.44	0.139	0.16	4.001	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	347.01	346.69	50.89	0.00	1270.10	0.273	0.37	3.898	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	420.37	419.89	0.00	0.00	1220.34	0.344	0.52	4.494	A
2	EBOFF	61.13	61.08	419.89	0.00	1103.42	0.055	0.06	3.453	A

Main results: (16:45-17:00)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	129.78	129.69	0.00	0.00	1281.73	0.101	0.11	3.124	A
1	WBOFF	417.29	416.84	129.69	0.00	1352.74	0.308	0.44	3.845	A
1	A5S	177.26	177.06	433.32	0.00	1007.36	0.176	0.21	4.334	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	424.99	424.48	62.31	0.00	1264.54	0.336	0.50	4.282	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	514.71	513.91	0.00	0.00	1220.34	0.422	0.72	5.091	A
2	EBOFF	74.87	74.80	513.91	0.00	1056.96	0.071	0.08	3.664	A

Main results: (17:00-17:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	129.92	129.92	0.00	0.00	1281.73	0.101	0.11	3.124	A
1	WBOFF	417.29	417.28	129.92	0.00	1352.63	0.309	0.44	3.848	A
1	A5S	177.26	177.26	433.80	0.00	1007.13	0.176	0.21	4.337	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	424.99	424.99	62.40	0.00	1264.49	0.336	0.50	4.287	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	515.27	515.25	0.00	0.00	1220.34	0.422	0.73	5.105	A
2	EBOFF	74.87	74.87	515.25	0.00	1056.29	0.071	0.08	3.667	A

Main results: (17:15-17:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	106.22	106.31	0.00	0.00	1281.73	0.083	0.09	3.064	A
1	WBOFF	340.71	341.15	106.31	0.00	1364.39	0.250	0.33	3.518	A
1	A5S	144.74	144.94	354.67	0.00	1044.08	0.139	0.16	4.006	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	347.01	347.51	51.04	0.00	1270.03	0.273	0.38	3.904	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	421.28	422.06	0.00	0.00	1220.34	0.345	0.53	4.513	A
2	EBOFF	61.13	61.20	422.06	0.00	1102.34	0.055	0.06	3.457	A

Main results: (17:30-17:45)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	88.93	88.99	0.00	0.00	1281.73	0.069	0.07	3.020	A
1	WBOFF	285.33	285.62	88.99	0.00	1373.01	0.208	0.26	3.310	A
1	A5S	121.21	121.34	296.93	0.00	1071.04	0.113	0.13	3.790	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	290.60	290.93	42.72	0.00	1274.08	0.228	0.30	3.661	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	352.69	353.18	0.00	0.00	1220.34	0.289	0.41	4.155	A
2	EBOFF	51.19	51.24	353.18	0.00	1136.38	0.045	0.05	3.319	A

(Default Analysis Set) - 2023 Base + Dev + Seasonality, AM Aug

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction 1 - Arm A5N	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 2 - Arm A5S	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev + Seasonality, AM Aug	2023 Base + Dev + Seasonality	AM Aug		Varies by Arm	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	1	A55 J3 W/B	Roundabout	A5N,WBOFF,A5S,WBON			3.79	A
2	2	A55 J3 E/B	Roundabout	A5N,EBON,A5S,EBOFF			5.33	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description
1	A5N	A5N	(untitled)	
1	WBOFF	WBOFF	(untitled)	
1	A5S	A5S	(untitled)	
1	WBON	WBON	(untitled)	
2	A5N	A5N	(untitled)	
2	EBON	EBON	(untitled)	
2	A5S	A5S	(untitled)	
2	EBOFF	EBOFF	(untitled)	

Capacity Options

Junction	Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	A5N	0.00	99999.00
1	WBOFF	0.00	99999.00
1	A5S	0.00	99999.00
1	WBON	0.00	99999.00
2	A5N	0.00	99999.00
2	EBON	0.00	99999.00
2	A5S	0.00	99999.00
2	EBOFF	0.00	99999.00

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	A5N	3.61	5.07	5.16	12.98	60.04	32.00	
1	WBOFF	4.86	4.86	0.00	14.16	60.04	35.00	
1	A5S	3.20	5.13	5.06	13.73	60.04	29.00	
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	A5N	3.89	4.59	5.75	13.42	58.41	31.00	
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	A5S	3.65	4.83	2.59	17.17	58.41	35.00	
2	EBOFF	4.38	4.38	0.00	19.28	58.41	33.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	A5N		(calculated)	(calculated)	0.476	1281.728
1	WBOFF		(calculated)	(calculated)	0.498	1417.332
1	A5S		(calculated)	(calculated)	0.467	1209.699
1	WBON		(calculated)	(calculated)	Exit-only	Exit-only
2	A5N		(calculated)	(calculated)	0.487	1294.899
2	EBON		(calculated)	(calculated)	Exit-only	Exit-only
2	A5S		(calculated)	(calculated)	0.475	1220.336
2	EBOFF		(calculated)	(calculated)	0.494	1310.901

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	A5N	Linked Arm		N/A	
1	WBOFF	ONE HOUR	✓	324.00	100.000
1	A5S	ONE HOUR	✓	155.00	100.000
1	WBON	Exit-only	✓	Exit-only	Exit-only
2	A5N	ONE HOUR	✓	597.00	100.000
2	EBON	Exit-only	✓	Exit-only	Exit-only
2	A5S	Linked Arm		N/A	
2	EBOFF	ONE HOUR	✓	90.00	100.000

Linked Arm Data

Junction	Arm	From Junction ID	From Arm ID	Link Type	Flow Source	Uniform Flow (PCU/hr)	Flow Multiplier (%)	Internal Storage Space (PCU)
1	A5N	2	A5S	Simple (vertical queueing)	Normal	0.00	100.00	
2	A5S	1	A5N	Simple (vertical queueing)	Normal	0.00	100.00	

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.000	0.000	209.000	15.000
	WBOFF	317.000	0.000	7.000	0.000
	A5S	82.000	0.000	0.000	73.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.00	0.00	0.93	0.07
	WBOFF	0.98	0.00	0.02	0.00
	A5S	0.53	0.00	0.00	0.47
	WBON	0.25	0.25	0.25	0.25

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Counts / Proportions (PCU/hr) - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	0.000	448.000	149.000	0.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	390.000	8.000	0.000	0.000
	EBOFF	16.000	0.000	74.000	0.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	0.00	0.75	0.25	0.00
	EBON	0.25	0.25	0.25	0.25
	A5S	0.98	0.02	0.00	0.00
	EBOFF	0.18	0.00	0.82	0.00

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	1.000	1.000	1.000	1.000
	WBOFF	1.000	1.000	1.000	1.000
	A5S	1.000	1.000	1.000	1.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.0	0.0	0.0	0.0
	WBOFF	0.0	0.0	0.0	0.0
	A5S	0.0	0.0	0.0	0.0
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Average PCU Per Vehicle - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	1.000	1.000	1.000	1.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	1.000	1.000	1.000	1.000
	EBOFF	1.000	1.000	1.000	1.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	0.0	0.0	0.0	0.0
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	0.0	0.0	0.0	0.0
	EBOFF	0.0	0.0	0.0	0.0

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	A5N	0.19	3.47	0.24	A
1	WBOFF	0.28	3.84	0.38	A
1	A5S	0.16	4.14	0.20	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	0.53	6.06	1.10	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.36	4.61	0.56	A
2	EBOFF	0.09	3.62	0.10	A

Main Results for each time segment

Main results: (07:45-08:00)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	167.14	166.54	0.00	0.00	1281.73	0.130	0.15	3.226	A
1	WBOFF	243.92	243.03	166.54	0.00	1334.39	0.183	0.22	3.295	A
1	A5S	116.69	116.22	248.93	0.00	1093.46	0.107	0.12	3.681	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	449.45	447.26	61.50	0.00	1264.93	0.355	0.55	4.391	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	299.26	297.97	0.00	0.00	1220.34	0.245	0.32	3.897	A
2	EBOFF	67.76	67.51	297.97	0.00	1163.66	0.058	0.06	3.284	A

Main results: (08:00-08:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	200.23	200.09	0.00	0.00	1281.73	0.156	0.18	3.327	A
1	WBOFF	291.27	291.03	200.09	0.00	1317.68	0.221	0.28	3.506	A
1	A5S	139.34	139.22	298.14	0.00	1070.48	0.130	0.15	3.865	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	536.69	535.93	73.67	0.00	1259.00	0.426	0.74	4.973	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	358.40	358.04	0.00	0.00	1220.34	0.294	0.41	4.173	A
2	EBOFF	80.91	80.85	358.04	0.00	1133.98	0.071	0.08	3.417	A

Main results: (08:15-08:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	245.10	244.89	0.00	0.00	1281.73	0.191	0.24	3.471	A
1	WBOFF	356.73	356.35	244.89	0.00	1295.37	0.275	0.38	3.831	A
1	A5S	170.66	170.47	365.05	0.00	1039.24	0.164	0.20	4.142	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	657.31	655.88	90.21	0.00	1250.94	0.525	1.09	6.035	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	438.84	438.26	0.00	0.00	1220.34	0.360	0.56	4.600	A
2	EBOFF	99.09	99.00	438.26	0.00	1094.34	0.091	0.10	3.616	A

Main results: (08:30-08:45)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	245.52	245.52	0.00	0.00	1281.73	0.192	0.24	3.473	A
1	WBOFF	356.73	356.73	245.52	0.00	1295.06	0.275	0.38	3.835	A
1	A5S	170.66	170.66	365.46	0.00	1039.04	0.164	0.20	4.145	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	657.31	657.28	90.30	0.00	1250.90	0.525	1.10	6.064	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	439.30	439.29	0.00	0.00	1220.34	0.360	0.56	4.608	A
2	EBOFF	99.09	99.09	439.29	0.00	1093.83	0.091	0.10	3.618	A

Main results: (08:45-09:00)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	200.89	201.09	0.00	0.00	1281.73	0.157	0.19	3.331	A
1	WBOFF	291.27	291.64	201.09	0.00	1317.18	0.221	0.29	3.510	A
1	A5S	139.34	139.52	298.81	0.00	1070.17	0.130	0.15	3.870	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	536.69	538.09	73.83	0.00	1258.92	0.426	0.75	5.005	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	359.16	359.72	0.00	0.00	1220.34	0.294	0.42	4.185	A
2	EBOFF	80.91	81.00	359.72	0.00	1133.15	0.071	0.08	3.423	A

Main results: (09:00-09:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	168.13	168.27	0.00	0.00	1281.73	0.131	0.15	3.235	A
1	WBOFF	243.92	244.17	168.27	0.00	1333.53	0.183	0.22	3.304	A
1	A5S	116.69	116.81	250.16	0.00	1092.88	0.107	0.12	3.690	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	449.45	450.23	61.81	0.00	1264.78	0.355	0.56	4.425	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	300.69	301.05	0.00	0.00	1220.34	0.246	0.33	3.917	A
2	EBOFF	67.76	67.82	301.05	0.00	1162.14	0.058	0.06	3.291	A

(Default Analysis Set) - 2023 Base + Dev + Seasonality, PM Aug

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction 1 - Arm A5N	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 2 - Arm A5S	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev + Seasonality, PM Aug	2023 Base + Dev + Seasonality	PM Aug		Varies by Arm	16:15	17:45	90	15		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	1	A55 J3 W/B	Roundabout	A5N,WBOFF,A5S,WBON			4.13	A
2	2	A55 J3 E/B	Roundabout	A5N,EBON,A5S,EBOFF			5.16	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description
1	A5N	A5N	(untitled)	
1	WBOFF	WBOFF	(untitled)	
1	A5S	A5S	(untitled)	
1	WBON	WBON	(untitled)	
2	A5N	A5N	(untitled)	
2	EBON	EBON	(untitled)	
2	A5S	A5S	(untitled)	
2	EBOFF	EBOFF	(untitled)	

Capacity Options

Junction	Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	A5N	0.00	99999.00
1	WBOFF	0.00	99999.00
1	A5S	0.00	99999.00
1	WBON	0.00	99999.00
2	A5N	0.00	99999.00
2	EBON	0.00	99999.00
2	A5S	0.00	99999.00
2	EBOFF	0.00	99999.00

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	A5N	3.61	5.07	5.16	12.98	60.04	32.00	
1	WBOFF	4.86	4.86	0.00	14.16	60.04	35.00	
1	A5S	3.20	5.13	5.06	13.73	60.04	29.00	
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	A5N	3.89	4.59	5.75	13.42	58.41	31.00	
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	A5S	3.65	4.83	2.59	17.17	58.41	35.00	
2	EBOFF	4.38	4.38	0.00	19.28	58.41	33.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	A5N		(calculated)	(calculated)	0.476	1281.728
1	WBOFF		(calculated)	(calculated)	0.498	1417.332
1	A5S		(calculated)	(calculated)	0.467	1209.699
1	WBON		(calculated)	(calculated)	Exit-only	Exit-only
2	A5N		(calculated)	(calculated)	0.487	1294.899
2	EBON		(calculated)	(calculated)	Exit-only	Exit-only
2	A5S		(calculated)	(calculated)	0.475	1220.336
2	EBOFF		(calculated)	(calculated)	0.494	1310.901

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	A5N	Linked Arm		N/A	
1	WBOFF	ONE HOUR	✓	434.00	100.000
1	A5S	ONE HOUR	✓	193.00	100.000
1	WBON	Exit-only	✓	Exit-only	Exit-only
2	A5N	ONE HOUR	✓	442.00	100.000
2	EBON	Exit-only	✓	Exit-only	Exit-only
2	A5S	Linked Arm		N/A	
2	EBOFF	ONE HOUR	✓	81.00	100.000

Linked Arm Data

Junction	Arm	From Junction ID	From Arm ID	Link Type	Flow Source	Uniform Flow (PCU/hr)	Flow Multiplier (%)	Internal Storage Space (PCU)
1	A5N	2	A5S	Simple (vertical queueing)	Normal	0.00	100.00	
2	A5S	1	A5N	Simple (vertical queueing)	Normal	0.00	100.00	

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.000	0.000	117.000	24.000
	WBOFF	428.000	0.000	6.000	0.000
	A5S	112.000	0.000	0.000	81.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.00	0.00	0.83	0.17
	WBOFF	0.99	0.00	0.01	0.00
	A5S	0.58	0.00	0.00	0.42
	WBON	0.25	0.25	0.25	0.25

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Counts / Proportions (PCU/hr) - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	0.000	350.000	92.000	0.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	222.000	8.000	0.000	0.000
	EBOFF	32.000	0.000	49.000	0.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	0.00	0.79	0.21	0.00
	EBON	0.25	0.25	0.25	0.25
	A5S	0.97	0.03	0.00	0.00
	EBOFF	0.40	0.00	0.60	0.00

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	1.000	1.000	1.000	1.000
	WBOFF	1.000	1.000	1.000	1.000
	A5S	1.000	1.000	1.000	1.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.0	0.0	0.0	0.0
	WBOFF	0.0	0.0	0.0	0.0
	A5S	0.0	0.0	0.0	0.0
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Average PCU Per Vehicle - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	1.000	1.000	1.000	1.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	1.000	1.000	1.000	1.000
	EBOFF	1.000	1.000	1.000	1.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 2 (for whole period)

		To			
		A5N	EBON	A5S	EBOFF
From	A5N	0.0	0.0	0.0	0.0
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	0.0	0.0	0.0	0.0
	EBOFF	0.0	0.0	0.0	0.0

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	A5N	0.12	3.19	0.14	A
1	WBOFF	0.36	4.17	0.55	A
1	A5S	0.22	4.71	0.28	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	0.39	4.66	0.63	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.49	5.75	0.94	A
2	EBOFF	0.09	3.88	0.10	A

Main Results for each time segment

Main results: (16:15-16:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	105.72	105.36	0.00	0.00	1281.73	0.082	0.09	3.060	A
1	WBOFF	326.74	325.49	105.36	0.00	1364.86	0.239	0.31	3.458	A
1	A5S	145.30	144.66	338.92	0.00	1051.44	0.138	0.16	3.967	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	332.76	331.35	50.77	0.00	1270.16	0.262	0.35	3.829	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	404.93	402.96	0.00	0.00	1220.34	0.332	0.49	4.393	A
2	EBOFF	60.98	60.75	402.96	0.00	1111.78	0.055	0.06	3.425	A

Main results: (16:30-16:45)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	126.64	126.56	0.00	0.00	1281.73	0.099	0.11	3.115	A
1	WBOFF	390.16	389.80	126.56	0.00	1354.30	0.288	0.40	3.732	A
1	A5S	173.50	173.33	405.95	0.00	1020.13	0.170	0.20	4.250	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	397.35	396.94	60.86	0.00	1265.24	0.314	0.45	4.144	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	484.99	484.35	0.00	0.00	1220.34	0.397	0.65	4.887	A
2	EBOFF	72.82	72.76	484.35	0.00	1071.56	0.068	0.07	3.603	A

Main results: (16:45-17:00)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	155.05	154.94	0.00	0.00	1281.73	0.121	0.14	3.194	A
1	WBOFF	477.84	477.25	154.94	0.00	1340.17	0.357	0.55	4.169	A
1	A5S	212.50	212.21	497.03	0.00	977.61	0.217	0.28	4.702	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	486.65	485.97	74.51	0.00	1258.59	0.387	0.63	4.655	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	593.80	592.67	0.00	0.00	1220.34	0.487	0.94	5.725	A
2	EBOFF	89.18	89.09	592.67	0.00	1018.04	0.088	0.10	3.875	A

Main results: (17:00-17:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	155.24	155.24	0.00	0.00	1281.73	0.121	0.14	3.195	A
1	WBOFF	477.84	477.83	155.24	0.00	1340.02	0.357	0.55	4.175	A
1	A5S	212.50	212.49	497.65	0.00	977.31	0.217	0.28	4.706	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	486.65	486.64	74.63	0.00	1258.53	0.387	0.63	4.663	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	594.54	594.51	0.00	0.00	1220.34	0.487	0.94	5.752	A
2	EBOFF	89.18	89.18	594.51	0.00	1017.13	0.088	0.10	3.879	A

Main results: (17:15-17:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	126.95	127.06	0.00	0.00	1281.73	0.099	0.11	3.117	A
1	WBOFF	390.16	390.74	127.06	0.00	1354.05	0.288	0.41	3.741	A
1	A5S	173.50	173.79	406.96	0.00	1019.66	0.170	0.21	4.257	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	397.35	398.02	61.05	0.00	1265.15	0.314	0.46	4.154	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	486.19	487.29	0.00	0.00	1220.34	0.398	0.67	4.917	A
2	EBOFF	72.82	72.91	487.29	0.00	1070.11	0.068	0.07	3.609	A

Main results: (17:30-17:45)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	A5N	106.27	106.35	0.00	0.00	1281.73	0.083	0.09	3.062	A
1	WBOFF	326.74	327.10	106.35	0.00	1364.36	0.239	0.32	3.473	A
1	A5S	145.30	145.48	340.68	0.00	1050.61	0.138	0.16	3.977	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5N	332.76	333.18	51.11	0.00	1270.00	0.262	0.36	3.844	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	407.00	407.66	0.00	0.00	1220.34	0.334	0.50	4.434	A
2	EBOFF	60.98	61.04	407.66	0.00	1109.46	0.055	0.06	3.435	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: Llanrecheymedd_Roundabout_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\Llannerch Y Medd Rbout
Report generation date: 04/06/2018 11:34:24

» (Default Analysis Set) - 2017 Base, AM
» (Default Analysis Set) - 2017 Base, PM
» (Default Analysis Set) - 2023 Base, AM
» (Default Analysis Set) - 2023 Base, PM
» (Default Analysis Set) - 2023 Base + Dev, AM
» (Default Analysis Set) - 2023 Base + Dev, PM

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2017 Base			
Arm B511E	0.19	5.89	0.16	A
Arm B5112	0.10	3.49	0.09	A
Arm B511N	0.36	3.88	0.27	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:15 - 17:45
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 04/06/2018 11:34:20

File summary

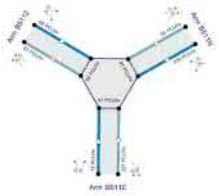
Title	(untitled)
Location	
Site Number	
Date	28/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	RogersA2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, AM	2017 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	Llanerchymedd Roundabout	Mini-roundabout	B511E,B5112,B511N	4.23	A

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
B511E	B511E	B5111 E	
B5112	B5112	B5112	
B511N	B511N	B5111 N	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
B511E	0.00	99999.00
B5112	0.00	99999.00
B511N	0.00	99999.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
B511E	2.19	2.19	6.18	8.12	17.89	11.65	0.00	
B5112	2.76	2.75	3.31	19.26	20.00	20.00	0.00	
B511N	2.00	2.00	5.21	6.99	20.00	20.00	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
B511E		(calculated)	(calculated)	0.550	765.025
B5112		(calculated)	(calculated)	1.094	1225.176
B511N		(calculated)	(calculated)	1.096	1337.062

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
B511E	ONE HOUR	✓	105.00	100.000
B5112	ONE HOUR	✓	91.00	100.000
B511N	ONE HOUR	✓	305.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		B511E	B5112	B511N
From	B511E	0.000	27.000	78.000
	B5112	60.000	0.000	31.000
	B511N	242.000	63.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		B511E	B5112	B511N
From	B511E	0.00	0.26	0.74
	B5112	0.66	0.00	0.34
	B511N	0.79	0.21	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		B511E	B5112	B511N
From	B511E	1.000	1.000	1.000
	B5112	1.000	1.000	1.000
	B511N	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		B511E	B5112	B511N
From	B511E	0.0	0.0	0.0
	B5112	0.0	0.0	0.0
	B511N	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B511E	0.16	5.89	0.19	A
B5112	0.09	3.49	0.10	A
B511N	0.27	3.88	0.36	A

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	79.05	78.57	47.25	0.00	739.04	0.107	0.12	5.447	A
B5112	68.51	68.26	58.37	0.00	1161.31	0.059	0.06	3.293	A
B511N	229.62	228.76	45.01	0.00	1287.73	0.178	0.22	3.396	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	94.39	94.28	56.59	0.00	733.90	0.129	0.15	5.628	A
B5112	81.81	81.75	70.04	0.00	1148.55	0.071	0.08	3.373	A
B511N	274.19	273.97	53.90	0.00	1277.99	0.215	0.27	3.585	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	115.61	115.44	69.29	0.00	726.92	0.159	0.19	5.886	A
B5112	100.19	100.11	85.76	0.00	1131.35	0.089	0.10	3.490	A
B511N	335.81	335.46	66.01	0.00	1264.72	0.266	0.36	3.873	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	115.61	115.60	69.36	0.00	726.88	0.159	0.19	5.888	A
B5112	100.19	100.19	85.88	0.00	1131.22	0.089	0.10	3.490	A
B511N	335.81	335.81	66.06	0.00	1264.66	0.266	0.36	3.875	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	94.39	94.55	56.71	0.00	733.84	0.129	0.15	5.634	A
B5112	81.81	81.89	70.24	0.00	1148.33	0.071	0.08	3.375	A
B511N	274.19	274.53	53.99	0.00	1277.89	0.215	0.27	3.588	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	79.05	79.16	47.48	0.00	738.91	0.107	0.12	5.459	A
B5112	68.51	68.57	58.81	0.00	1160.84	0.059	0.06	3.295	A
B511N	229.62	229.85	45.21	0.00	1287.51	0.178	0.22	3.403	A

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, PM	2017 Base	PM		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	Llanerchymedd Roundabout	Mini-roundabout	B511E,B5112,B511N	5.51	A

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
B511E	B511E	B5111 E	
B5112	B5112	B5112	
B511N	B511N	B5111 N	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
B511E	0.00	99999.00
B5112	0.00	99999.00
B511N	0.00	99999.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
B511E	2.19	2.19	6.18	8.12	17.89	11.65	0.00	
B5112	2.76	2.75	3.31	19.26	20.00	20.00	0.00	
B511N	2.00	2.00	5.21	6.99	20.00	20.00	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
B511E		(calculated)	(calculated)	0.550	765.025
B5112		(calculated)	(calculated)	1.094	1225.176
B511N		(calculated)	(calculated)	1.096	1337.062

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
B511E	ONE HOUR	✓	245.00	100.000
B5112	ONE HOUR	✓	116.00	100.000
B511N	ONE HOUR	✓	185.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		B511E	B5112	B511N
From	B511E	0.000	54.000	191.000
	B5112	60.000	0.000	56.000
	B511N	133.000	52.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		B511E	B5112	B511N
From	B511E	0.00	0.22	0.78
	B5112	0.52	0.00	0.48
	B511N	0.72	0.28	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		B511E	B5112	B511N
From	B511E	1.000	1.000	1.000
	B5112	1.000	1.000	1.000
	B511N	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		B511E	B5112	B511N
From	B511E	0.0	0.0	0.0
	B5112	0.0	0.0	0.0
	B511N	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B511E	0.37	7.76	0.58	A
B5112	0.13	4.15	0.15	A
B511N	0.16	3.39	0.19	A

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	184.45	183.14	39.01	0.00	743.57	0.248	0.33	6.410	A
B5112	87.33	86.98	142.78	0.00	1068.96	0.082	0.09	3.666	A
B511N	139.28	138.79	44.99	0.00	1287.76	0.108	0.12	3.131	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	220.25	219.88	46.72	0.00	739.33	0.298	0.42	6.926	A
B5112	104.28	104.19	171.41	0.00	1037.63	0.101	0.11	3.856	A
B511N	166.31	166.20	53.89	0.00	1278.00	0.130	0.15	3.237	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	269.75	269.13	57.21	0.00	733.56	0.368	0.57	7.741	A
B5112	127.72	127.58	209.81	0.00	995.61	0.128	0.15	4.147	A
B511N	203.69	203.52	65.99	0.00	1264.74	0.161	0.19	3.392	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	269.75	269.74	57.25	0.00	733.54	0.368	0.58	7.761	A
B5112	127.72	127.72	210.28	0.00	995.10	0.128	0.15	4.150	A
B511N	203.69	203.69	66.06	0.00	1264.66	0.161	0.19	3.392	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	220.25	220.85	46.79	0.00	739.29	0.298	0.43	6.951	A
B5112	104.28	104.42	172.17	0.00	1036.80	0.101	0.11	3.861	A
B511N	166.31	166.48	54.01	0.00	1277.87	0.130	0.15	3.241	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	184.45	184.83	39.18	0.00	743.48	0.248	0.33	6.447	A
B5112	87.33	87.42	144.09	0.00	1067.52	0.082	0.09	3.672	A
B511N	139.28	139.39	45.22	0.00	1287.50	0.108	0.12	3.135	A

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, AM	2023 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	Llanerchymedd Roundabout	Mini-roundabout	B511E,B5112,B511N	4.32	A

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
B511E	B511E	B5111 E	
B5112	B5112	B5112	
B511N	B511N	B5111 N	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
B511E	0.00	99999.00
B5112	0.00	99999.00
B511N	0.00	99999.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
B511E	2.19	2.19	6.18	8.12	17.89	11.65	0.00	
B5112	2.76	2.75	3.31	19.26	20.00	20.00	0.00	
B511N	2.00	2.00	5.21	6.99	20.00	20.00	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
B511E		(calculated)	(calculated)	0.550	765.025
B5112		(calculated)	(calculated)	1.094	1225.176
B511N		(calculated)	(calculated)	1.096	1337.062

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
B511E	ONE HOUR	✓	112.00	100.000
B5112	ONE HOUR	✓	96.00	100.000
B511N	ONE HOUR	✓	324.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		B511E	B5112	B511N
From	B511E	0.000	29.000	83.000
	B5112	63.000	0.000	33.000
	B511N	257.000	67.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		B511E	B5112	B511N
From	B511E	0.00	0.26	0.74
	B5112	0.66	0.00	0.34
	B511N	0.79	0.21	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		B511E	B5112	B511N
From	B511E	1.000	1.000	1.000
	B5112	1.000	1.000	1.000
	B511N	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		B511E	B5112	B511N
From	B511E	0.0	0.0	0.0
	B5112	0.0	0.0	0.0
	B511N	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B511E	0.17	5.99	0.20	A
B5112	0.09	3.53	0.10	A
B511N	0.28	3.98	0.39	A

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	84.32	83.81	50.25	0.00	737.39	0.114	0.13	5.508	A
B5112	72.27	72.01	62.11	0.00	1157.22	0.062	0.07	3.317	A
B511N	243.92	242.99	47.26	0.00	1285.27	0.190	0.23	3.450	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	100.69	100.57	60.18	0.00	731.93	0.138	0.16	5.702	A
B5112	86.30	86.24	74.53	0.00	1143.64	0.075	0.08	3.403	A
B511N	291.27	291.02	56.60	0.00	1275.03	0.228	0.29	3.658	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	123.31	123.13	73.69	0.00	724.50	0.170	0.20	5.985	A
B5112	105.70	105.61	91.25	0.00	1125.34	0.094	0.10	3.529	A
B511N	356.73	356.34	69.31	0.00	1261.10	0.283	0.39	3.977	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	123.31	123.31	73.77	0.00	724.46	0.170	0.20	5.987	A
B5112	105.70	105.70	91.38	0.00	1125.19	0.094	0.10	3.530	A
B511N	356.73	356.73	69.36	0.00	1261.04	0.283	0.39	3.980	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	100.69	100.86	60.31	0.00	731.86	0.138	0.16	5.708	A
B5112	86.30	86.39	74.74	0.00	1143.40	0.075	0.08	3.407	A
B511N	291.27	291.65	56.69	0.00	1274.93	0.228	0.30	3.664	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	84.32	84.44	50.49	0.00	737.26	0.114	0.13	5.517	A
B5112	72.27	72.33	62.58	0.00	1156.71	0.062	0.07	3.319	A
B511N	243.92	244.17	47.47	0.00	1285.04	0.190	0.24	3.458	A

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, PM	2023 Base	PM		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	Llanerchymedd Roundabout	Mini-roundabout	B511E,B5112,B511N	5.67	A

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
B511E	B511E	B5111 E	
B5112	B5112	B5112	
B511N	B511N	B5111 N	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
B511E	0.00	99999.00
B5112	0.00	99999.00
B511N	0.00	99999.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
B511E	2.19	2.19	6.18	8.12	17.89	11.65	0.00	
B5112	2.76	2.75	3.31	19.26	20.00	20.00	0.00	
B511N	2.00	2.00	5.21	6.99	20.00	20.00	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
B511E		(calculated)	(calculated)	0.550	765.025
B5112		(calculated)	(calculated)	1.094	1225.176
B511N		(calculated)	(calculated)	1.096	1337.062

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
B511E	ONE HOUR	✓	258.00	100.000
B5112	ONE HOUR	✓	122.00	100.000
B511N	ONE HOUR	✓	195.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		B511E	B5112	B511N
From	B511E	0.000	57.000	201.000
	B5112	63.000	0.000	59.000
	B511N	140.000	55.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		B511E	B5112	B511N
From	B511E	0.00	0.22	0.78
	B5112	0.52	0.00	0.48
	B511N	0.72	0.28	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		B511E	B5112	B511N
From	B511E	1.000	1.000	1.000
	B5112	1.000	1.000	1.000
	B511N	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		B511E	B5112	B511N
From	B511E	0.0	0.0	0.0
	B5112	0.0	0.0	0.0
	B511N	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B511E	0.39	8.04	0.63	A
B5112	0.14	4.24	0.16	A
B511N	0.17	3.44	0.20	A

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	194.24	192.83	41.26	0.00	742.33	0.262	0.35	6.536	A
B5112	91.85	91.47	150.23	0.00	1060.81	0.087	0.09	3.714	A
B511N	146.81	146.29	47.23	0.00	1285.29	0.114	0.13	3.158	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	231.94	231.53	49.41	0.00	737.85	0.314	0.45	7.103	A
B5112	109.68	109.58	180.38	0.00	1027.82	0.107	0.12	3.920	A
B511N	175.30	175.18	56.59	0.00	1275.04	0.137	0.16	3.272	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	284.06	283.37	60.50	0.00	731.75	0.388	0.63	8.004	A
B5112	134.32	134.17	220.77	0.00	983.63	0.137	0.16	4.238	A
B511N	214.70	214.52	69.28	0.00	1261.13	0.170	0.20	3.439	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	284.06	284.05	60.56	0.00	731.72	0.388	0.63	8.041	A
B5112	134.32	134.32	221.29	0.00	983.06	0.137	0.16	4.241	A
B511N	214.70	214.70	69.36	0.00	1261.04	0.170	0.20	3.439	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	231.94	232.60	49.49	0.00	737.80	0.314	0.46	7.134	A
B5112	109.68	109.83	181.21	0.00	1026.91	0.107	0.12	3.925	A
B511N	175.30	175.48	56.71	0.00	1274.90	0.138	0.16	3.276	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	194.24	194.66	41.44	0.00	742.23	0.262	0.36	6.581	A
B5112	91.85	91.95	151.65	0.00	1059.25	0.087	0.10	3.721	A
B511N	146.81	146.93	47.48	0.00	1285.02	0.114	0.13	3.162	A

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, AM	2023 Base + Dev	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	Llanerchymedd Roundabout	Mini-roundabout	B511E,B5112,B511N	5.98	A

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
B511E	B511E	B5111 E	
B5112	B5112	B5112	
B511N	B511N	B5111 N	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
B511E	0.00	99999.00
B5112	0.00	99999.00
B511N	0.00	99999.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
B511E	2.19	2.19	6.18	8.12	17.89	11.65	0.00	
B5112	2.76	2.75	3.31	19.26	20.00	20.00	0.00	
B511N	2.00	2.00	5.21	6.99	20.00	20.00	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
B511E		(calculated)	(calculated)	0.550	765.025
B5112		(calculated)	(calculated)	1.094	1225.176
B511N		(calculated)	(calculated)	1.096	1337.062

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
B511E	ONE HOUR	✓	270.00	100.000
B5112	ONE HOUR	✓	96.00	100.000
B511N	ONE HOUR	✓	482.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		B511E	B5112	B511N
From	B511E	0.000	29.000	241.000
	B5112	63.000	0.000	33.000
	B511N	415.000	67.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		B511E	B5112	B511N
From	B511E	0.00	0.11	0.89
	B5112	0.66	0.00	0.34
	B511N	0.86	0.14	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		B511E	B5112	B511N
From	B511E	1.000	1.000	1.000
	B5112	1.000	1.000	1.000
	B511N	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		B511E	B5112	B511N
From	B511E	0.0	0.0	0.0
	B5112	0.0	0.0	0.0
	B511N	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B511E	0.41	8.43	0.69	A
B5112	0.11	4.34	0.13	A
B511N	0.42	4.93	0.72	A

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	203.27	201.76	50.22	0.00	737.40	0.276	0.38	6.702	A
B5112	72.27	71.97	180.09	0.00	1028.13	0.070	0.08	3.765	A
B511N	362.87	361.31	47.23	0.00	1285.30	0.282	0.39	3.890	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	242.72	242.27	60.16	0.00	731.94	0.332	0.49	7.346	A
B5112	86.30	86.22	216.25	0.00	988.57	0.087	0.10	3.989	A
B511N	433.31	432.83	56.58	0.00	1275.05	0.340	0.51	4.273	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	297.28	296.50	73.65	0.00	724.52	0.410	0.69	8.394	A
B5112	105.70	105.57	264.65	0.00	935.62	0.113	0.13	4.337	A
B511N	530.69	529.86	69.28	0.00	1261.13	0.421	0.72	4.918	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	297.28	297.25	73.77	0.00	724.46	0.410	0.69	8.427	A
B5112	105.70	105.70	265.33	0.00	934.88	0.113	0.13	4.341	A
B511N	530.69	530.68	69.36	0.00	1261.04	0.421	0.72	4.928	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	242.72	243.48	60.35	0.00	731.84	0.332	0.50	7.385	A
B5112	86.30	86.43	217.33	0.00	987.39	0.087	0.10	3.997	A
B511N	433.31	434.13	56.72	0.00	1274.90	0.340	0.52	4.285	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	203.27	203.74	50.51	0.00	737.25	0.276	0.38	6.755	A
B5112	72.27	72.35	181.86	0.00	1026.20	0.070	0.08	3.776	A
B511N	362.87	363.37	47.48	0.00	1285.02	0.282	0.40	3.907	A

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, PM	2023 Base + Dev	PM		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	Llanerchymedd Roundabout	Mini-roundabout	B511E,B5112,B511N	8.57	A

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
B511E	B511E	B5111 E	
B5112	B5112	B5112	
B511N	B511N	B5111 N	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
B511E	0.00	99999.00
B5112	0.00	99999.00
B511N	0.00	99999.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
B511E	2.19	2.19	6.18	8.12	17.89	11.65	0.00	
B5112	2.76	2.75	3.31	19.26	20.00	20.00	0.00	
B511N	2.00	2.00	5.21	6.99	20.00	20.00	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
B511E		(calculated)	(calculated)	0.550	765.025
B5112		(calculated)	(calculated)	1.094	1225.176
B511N		(calculated)	(calculated)	1.096	1337.062

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
B511E	ONE HOUR	✓	418.00	100.000
B5112	ONE HOUR	✓	122.00	100.000
B511N	ONE HOUR	✓	354.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		B511E	B5112	B511N
From	B511E	0.000	57.000	361.000
	B5112	63.000	0.000	59.000
	B511N	299.000	55.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		B511E	B5112	B511N
From	B511E	0.00	0.14	0.86
	B5112	0.52	0.00	0.48
	B511N	0.84	0.16	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		B511E	B5112	B511N
From	B511E	1.000	1.000	1.000
	B5112	1.000	1.000	1.000
	B511N	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		B511E	B5112	B511N
From	B511E	0.0	0.0	0.0
	B5112	0.0	0.0	0.0
	B511N	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B511E	0.63	13.24	1.66	B
B5112	0.17	5.49	0.20	A
B511N	0.31	4.13	0.45	A

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	314.69	311.80	41.25	0.00	742.34	0.424	0.72	8.307	A
B5112	91.85	91.41	269.28	0.00	930.55	0.099	0.11	4.288	A
B511N	266.51	265.47	47.20	0.00	1285.33	0.207	0.26	3.527	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	375.77	374.61	49.40	0.00	737.86	0.509	1.02	9.877	A
B5112	109.68	109.54	323.52	0.00	871.20	0.126	0.14	4.726	A
B511N	318.24	317.96	56.56	0.00	1275.07	0.250	0.33	3.761	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	460.23	457.75	60.49	0.00	731.76	0.629	1.63	13.016	B
B5112	134.32	134.09	395.33	0.00	792.63	0.169	0.20	5.465	A
B511N	389.76	389.31	69.24	0.00	1261.17	0.309	0.44	4.127	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	460.23	460.11	60.56	0.00	731.72	0.629	1.66	13.238	B
B5112	134.32	134.32	397.37	0.00	790.41	0.170	0.20	5.486	A
B511N	389.76	389.76	69.36	0.00	1261.04	0.309	0.45	4.131	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	375.77	378.18	49.51	0.00	737.79	0.509	1.06	10.078	B
B5112	109.68	109.91	326.61	0.00	867.82	0.126	0.15	4.752	A
B511N	318.24	318.68	56.76	0.00	1274.86	0.250	0.33	3.768	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B511E	314.69	315.94	41.45	0.00	742.23	0.424	0.75	8.469	A
B5112	91.85	91.99	272.86	0.00	926.63	0.099	0.11	4.315	A
B511N	266.51	266.80	47.50	0.00	1285.00	0.207	0.26	3.538	A

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A5_TREBAN_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A5 Treban Crossroads
Report generation date: 01/06/2018 15:10:44

» (Default Analysis Set) - 2017 Base, AM
» (Default Analysis Set) - 2017 Base, PM
» (Default Analysis Set) - 2023 Base, AM
» (Default Analysis Set) - 2023 Base, PM
» (Default Analysis Set) - 2023 Base + Dev, AM
» (Default Analysis Set) - 2023 Base + Dev, PM

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2017 Base			
Stream B-CD	0.09	7.84	0.08	A
Stream B-AD	0.32	9.74	0.25	A
Stream A-BCD	0.02	5.47	0.02	A
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-
Stream D-AB	0.10	7.38	0.09	A
Stream D-BC	0.08	8.09	0.07	A
Stream C-ABD	0.15	6.01	0.13	A
Stream C-D	-	-	-	-
Stream C-A	-	-	-	-

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 07:30 - 09:00
"D2 - 2017 Base, PM" model duration: 16:15 - 17:45
"D3 - 2023 Base, AM" model duration: 07:30 - 09:00
"D4 - 2023 Base, PM" model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM" model duration: 07:30 - 09:00
"D6 - 2023 Base + Dev, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 01/06/2018 15:10:36

File summary

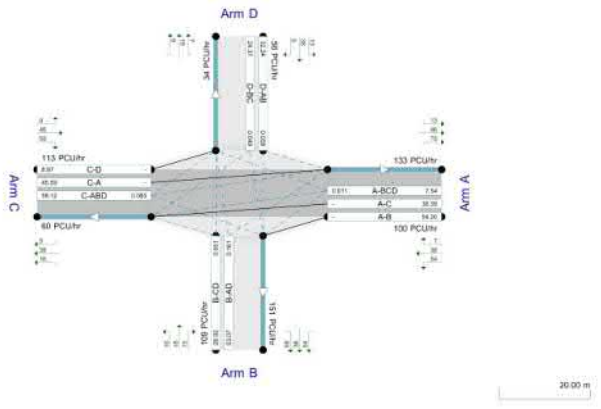
Title	(untitled)
Location	
Site Number	
Date	14/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, AM	2017 Base	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	A5 Treban	Crossroads	Two-way	A,B,C,D	7.93	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	A4080		Minor
C	C	A5W		Major
D	D	B5112		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	8.10		0.00		2.20	250.00	✓	1.00
C	8.10		0.00		2.20	250.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	7.50	4.70	4.12	4.00	✓	2.00	32	25
D	One lane plus flare				10.00	5.75	3.00	2.20	2.20	✓	1.00	23	22

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	718.741	-	-	-	-	-	-	0.253	0.361	0.253	-	-	-
1	B-A	570.695	0.094	0.239	0.239	-	-	-	0.150	0.341	-	0.239	0.239	0.119
1	B-C	639.244	0.089	0.225	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	499.905	0.083	0.209	0.209	-	-	-	0.132	0.299	0.132	-	-	-
1	B-D, offside lane	570.695	0.094	0.239	0.239	-	-	-	0.150	0.341	0.150	-	-	-
1	C-B	718.741	0.253	0.253	0.361	-	-	-	-	-	-	-	-	-
1	D-A	697.649	-	-	-	-	-	-	0.246	-	0.097	-	-	-
1	D-B, nearside lane	542.408	0.143	0.143	0.324	-	-	-	0.227	0.227	0.090	-	-	-
1	D-B, offside lane	542.408	0.143	0.143	0.324	-	-	-	0.227	0.227	0.090	-	-	-
1	D-C	542.408	-	0.143	0.324	0.113	0.227	0.227	0.227	0.227	0.090	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	133.00	100.000
B	ONE HOUR	✓	146.10	100.000
C	ONE HOUR	✓	151.00	100.000
D	ONE HOUR	✓	75.20	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowinPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:30-07:45	A	100.13	100.13		
07:30-07:45	B	109.99	109.99		
07:30-07:45	C	113.68	113.68		
07:30-07:45	D	56.61	56.61		
07:45-08:00	A	119.56	119.56		
07:45-08:00	B	131.34	131.34		
07:45-08:00	C	135.75	135.75		
07:45-08:00	D	67.60	67.60		
08:00-08:15	A	146.44	146.44		
08:00-08:15	B	160.86	160.86		
08:00-08:15	C	166.25	166.25		
08:00-08:15	D	82.80	82.80		
08:15-08:30	A	146.44	146.44		
08:15-08:30	B	160.86	160.86		
08:15-08:30	C	166.25	166.25		
08:15-08:30	D	82.80	82.80		
08:30-08:45	A	119.56	119.56		
08:30-08:45	B	131.34	131.34		
08:30-08:45	C	135.75	135.75		
08:30-08:45	D	67.60	67.60		
08:45-09:00	A	100.13	100.13		
08:45-09:00	B	109.99	109.99		
08:45-09:00	C	113.68	113.68		
08:45-09:00	D	56.61	56.61		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	72.000	51.000	10.000
	B	100.100	0.000	22.000	24.000
	C	61.000	78.000	0.000	12.000
	D	16.900	51.300	7.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.54	0.38	0.08
	B	0.69	0.00	0.15	0.16
	C	0.40	0.52	0.00	0.08
	D	0.22	0.68	0.09	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.08	7.84	0.09	A
B-AD	0.25	9.74	0.32	A
A-BCD	0.02	5.47	0.02	A
A-B	-	-	-	-
A-C	-	-	-	-
D-AB	0.09	7.38	0.10	A
D-BC	0.07	8.09	0.08	A
C-ABD	0.13	6.01	0.15	A
C-D	-	-	-	-
C-A	-	-	-	-

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	26.92	26.71	0.00	527.73	0.051	0.05	7.181	A
B-AD	83.07	82.31	0.00	515.84	0.161	0.19	8.290	A
A-BCD	7.54	7.50	0.00	684.24	0.011	0.01	5.319	A
A-B	54.20	54.20	0.00	-	-	-	-	-
A-C	38.39	38.39	0.00	-	-	-	-	-
D-AB	32.24	32.00	0.00	554.52	0.058	0.06	6.886	A
D-BC	24.37	24.17	0.00	500.19	0.049	0.05	7.559	A
C-ABD	59.12	58.75	0.00	695.45	0.085	0.09	5.652	A
C-D	8.97	8.97	0.00	-	-	-	-	-
C-A	45.59	45.59	0.00	-	-	-	-	-

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	32.51	32.45	0.00	516.07	0.063	0.07	7.443	A
B-AD	98.83	98.63	0.00	504.92	0.196	0.24	8.856	A
A-BCD	9.01	9.00	0.00	677.57	0.013	0.01	5.384	A
A-B	64.72	64.72	0.00	-	-	-	-	-
A-C	45.84	45.84	0.00	-	-	-	-	-
D-AB	38.55	38.50	0.00	546.33	0.071	0.08	7.088	A
D-BC	29.05	29.00	0.00	491.80	0.059	0.06	7.777	A
C-ABD	70.80	70.72	0.00	691.62	0.102	0.11	5.798	A
C-D	10.68	10.68	0.00	-	-	-	-	-
C-A	54.27	54.27	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	40.44	40.36	0.00	499.64	0.081	0.09	7.837	A
B-AD	120.42	120.10	0.00	490.02	0.246	0.32	9.722	A
A-BCD	11.05	11.03	0.00	668.60	0.017	0.02	5.474	A
A-B	79.25	79.25	0.00	-	-	-	-	-
A-C	56.14	56.14	0.00	-	-	-	-	-
D-AB	47.31	47.23	0.00	535.03	0.088	0.10	7.380	A
D-BC	35.48	35.42	0.00	480.27	0.074	0.08	8.091	A
C-ABD	87.16	87.03	0.00	686.75	0.127	0.15	6.001	A
C-D	13.00	13.00	0.00	-	-	-	-	-
C-A	66.09	66.09	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	40.45	40.45	0.00	499.47	0.081	0.09	7.842	A
B-AD	120.41	120.40	0.00	489.95	0.246	0.32	9.741	A
A-BCD	11.05	11.05	0.00	668.56	0.017	0.02	5.474	A
A-B	79.25	79.25	0.00	-	-	-	-	-
A-C	56.14	56.14	0.00	-	-	-	-	-
D-AB	47.32	47.31	0.00	534.98	0.088	0.10	7.381	A
D-BC	35.48	35.48	0.00	480.23	0.074	0.08	8.094	A
C-ABD	87.16	87.16	0.00	686.74	0.127	0.15	6.005	A
C-D	13.00	13.00	0.00	-	-	-	-	-
C-A	66.09	66.09	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	32.52	32.60	0.00	515.80	0.063	0.07	7.453	A
B-AD	98.82	99.13	0.00	504.80	0.196	0.25	8.882	A
A-BCD	9.01	9.02	0.00	677.49	0.013	0.01	5.387	A
A-B	64.72	64.72	0.00	-	-	-	-	-
A-C	45.84	45.84	0.00	-	-	-	-	-
D-AB	38.55	38.64	0.00	546.25	0.071	0.08	7.095	A
D-BC	29.05	29.11	0.00	491.72	0.059	0.06	7.782	A
C-ABD	70.80	70.93	0.00	691.61	0.102	0.12	5.802	A
C-D	10.68	10.68	0.00	-	-	-	-	-
C-A	54.27	54.27	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	26.94	26.99	0.00	527.27	0.051	0.05	7.195	A
B-AD	83.06	83.26	0.00	515.58	0.161	0.19	8.332	A
A-BCD	7.54	7.55	0.00	684.07	0.011	0.01	5.322	A
A-B	54.20	54.20	0.00	-	-	-	-	-
A-C	38.39	38.39	0.00	-	-	-	-	-
D-AB	32.24	32.30	0.00	554.35	0.058	0.06	6.895	A
D-BC	24.37	24.42	0.00	500.03	0.049	0.05	7.572	A
C-ABD	59.12	59.20	0.00	695.43	0.085	0.09	5.660	A
C-D	8.97	8.97	0.00	-	-	-	-	-
C-A	45.59	45.59	0.00	-	-	-	-	-

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, PM	2017 Base	PM		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	A5 Treban	Crossroads	Two-way	A,B,C,D	8.22	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	A4080		Minor
C	C	A5W		Major
D	D	B5112		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	8.10		0.00		2.20	250.00	✓	1.00
C	8.10		0.00		2.20	250.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	7.50	4.70	4.12	4.00	✓	2.00	32	25
D	One lane plus flare				10.00	5.75	3.00	2.20	2.20	✓	1.00	23	22

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	718.741	-	-	-	-	-	-	0.253	0.361	0.253	-	-	-
1	B-A	535.300	0.089	0.224	0.224	-	-	-	0.141	0.320	-	0.224	0.224	0.112
1	B-C	684.505	0.095	0.241	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	535.300	0.089	0.224	0.224	-	-	-	0.141	0.320	0.141	-	-	-
1	B-D, offside lane	535.300	0.089	0.224	0.224	-	-	-	0.141	0.320	0.141	-	-	-
1	C-B	718.741	0.253	0.253	0.361	-	-	-	-	-	-	-	-	-
1	D-A	697.649	-	-	-	-	-	-	0.246	-	0.097	-	-	-
1	D-B, nearside lane	542.408	0.143	0.143	0.324	-	-	-	0.227	0.227	0.090	-	-	-
1	D-B, offside lane	542.408	0.143	0.143	0.324	-	-	-	0.227	0.227	0.090	-	-	-
1	D-C	542.408	-	0.143	0.324	0.113	0.227	0.227	0.227	0.227	0.090	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	165.30	100.000
B	ONE HOUR	✓	196.30	100.000
C	ONE HOUR	✓	79.10	100.000
D	ONE HOUR	✓	43.20	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	A	124.45	124.45		
16:15-16:30	B	147.78	147.78		
16:15-16:30	C	59.55	59.55		
16:15-16:30	D	32.52	32.52		
16:30-16:45	A	148.60	148.60		
16:30-16:45	B	176.47	176.47		
16:30-16:45	C	71.11	71.11		
16:30-16:45	D	38.84	38.84		
16:45-17:00	A	182.00	182.00		
16:45-17:00	B	216.13	216.13		
16:45-17:00	C	87.09	87.09		
16:45-17:00	D	47.56	47.56		
17:00-17:15	A	182.00	182.00		
17:00-17:15	B	216.13	216.13		
17:00-17:15	C	87.09	87.09		
17:00-17:15	D	47.56	47.56		
17:15-17:30	A	148.60	148.60		
17:15-17:30	B	176.47	176.47		
17:15-17:30	C	71.11	71.11		
17:15-17:30	D	38.84	38.84		
17:30-17:45	A	124.45	124.45		
17:30-17:45	B	147.78	147.78		
17:30-17:45	C	59.55	59.55		
17:30-17:45	D	32.52	32.52		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	81.200	72.500	11.600
	B	82.400	0.000	63.600	50.300
	C	41.500	26.000	0.000	11.600
	D	5.300	28.900	9.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.49	0.44	0.07
	B	0.42	0.00	0.32	0.26
	C	0.52	0.33	0.00	0.15
	D	0.12	0.67	0.21	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.19	7.95	0.23	A
B-AD	0.23	9.75	0.30	A
A-BCD	0.02	5.27	0.02	A
A-B	-	-	-	-
A-C	-	-	-	-
D-AB	0.04	7.12	0.04	A
D-BC	0.05	7.83	0.06	A
C-ABD	0.04	5.59	0.04	A
C-D	-	-	-	-
C-A	-	-	-	-

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	69.17	68.64	0.00	581.61	0.119	0.13	7.010	A
B-AD	78.61	77.87	0.00	499.53	0.157	0.18	8.523	A
A-BCD	8.75	8.70	0.00	702.43	0.012	0.01	5.189	A
A-B	61.12	61.12	0.00	-	-	-	-	-
A-C	54.57	54.57	0.00	-	-	-	-	-
D-AB	15.02	14.91	0.00	543.68	0.028	0.03	6.806	A
D-BC	17.50	17.36	0.00	503.70	0.035	0.04	7.400	A
C-ABD	19.61	19.49	0.00	687.01	0.029	0.03	5.393	A
C-D	8.73	8.73	0.00	-	-	-	-	-
C-A	31.22	31.22	0.00	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	83.22	83.08	0.00	570.74	0.146	0.17	7.380	A
B-AD	93.25	93.06	0.00	492.37	0.189	0.23	9.012	A
A-BCD	10.46	10.45	0.00	699.43	0.015	0.02	5.224	A
A-B	72.98	72.98	0.00	-	-	-	-	-
A-C	65.16	65.16	0.00	-	-	-	-	-
D-AB	17.97	17.95	0.00	537.06	0.033	0.03	6.934	A
D-BC	20.86	20.83	0.00	496.00	0.042	0.04	7.575	A
C-ABD	23.43	23.40	0.00	681.01	0.034	0.04	5.474	A
C-D	10.42	10.42	0.00	-	-	-	-	-
C-A	37.26	37.26	0.00	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	102.98	102.75	0.00	555.68	0.185	0.23	7.944	A
B-AD	113.15	112.87	0.00	482.39	0.235	0.30	9.734	A
A-BCD	12.83	12.81	0.00	695.46	0.018	0.02	5.273	A
A-B	89.37	89.37	0.00	-	-	-	-	-
A-C	79.80	79.80	0.00	-	-	-	-	-
D-AB	22.08	22.05	0.00	527.93	0.042	0.04	7.115	A
D-BC	25.48	25.44	0.00	485.45	0.052	0.05	7.824	A
C-ABD	28.73	28.70	0.00	672.84	0.043	0.04	5.588	A
C-D	12.75	12.75	0.00	-	-	-	-	-
C-A	45.61	45.61	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	102.99	102.99	0.00	555.55	0.185	0.23	7.954	A
B-AD	113.14	113.13	0.00	482.35	0.235	0.30	9.750	A
A-BCD	12.83	12.83	0.00	695.45	0.018	0.02	5.273	A
A-B	89.37	89.37	0.00	-	-	-	-	-
A-C	79.80	79.80	0.00	-	-	-	-	-
D-AB	22.08	22.08	0.00	527.91	0.042	0.04	7.116	A
D-BC	25.48	25.48	0.00	485.40	0.052	0.06	7.827	A
C-ABD	28.73	28.73	0.00	672.84	0.043	0.04	5.588	A
C-D	12.75	12.75	0.00	-	-	-	-	-
C-A	45.61	45.61	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	83.24	83.45	0.00	570.53	0.146	0.17	7.393	A
B-AD	93.23	93.50	0.00	492.31	0.189	0.24	9.032	A
A-BCD	10.46	10.47	0.00	699.41	0.015	0.02	5.227	A
A-B	72.98	72.98	0.00	-	-	-	-	-
A-C	65.16	65.16	0.00	-	-	-	-	-
D-AB	17.97	18.01	0.00	537.01	0.033	0.03	6.938	A
D-BC	20.86	20.90	0.00	495.91	0.042	0.04	7.578	A
C-ABD	23.43	23.46	0.00	681.00	0.034	0.04	5.474	A
C-D	10.42	10.42	0.00	-	-	-	-	-
C-A	37.26	37.26	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	69.20	69.35	0.00	581.23	0.119	0.14	7.036	A
B-AD	78.58	78.77	0.00	499.42	0.157	0.19	8.563	A
A-BCD	8.75	8.76	0.00	702.38	0.012	0.01	5.189	A
A-B	61.12	61.12	0.00	-	-	-	-	-
A-C	54.57	54.57	0.00	-	-	-	-	-
D-AB	15.02	15.05	0.00	543.58	0.028	0.03	6.810	A
D-BC	17.50	17.54	0.00	503.54	0.035	0.04	7.409	A
C-ABD	19.61	19.63	0.00	686.99	0.029	0.03	5.394	A
C-D	8.73	8.73	0.00	-	-	-	-	-
C-A	31.22	31.22	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, AM	2023 Base	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	A5 Treban	Crossroads	Two-way	A,B,C,D	8.09	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	A4080		Minor
C	C	A5W		Major
D	D	B5112		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	8.10		0.00		2.20	250.00	✓	1.00
C	8.10		0.00		2.20	250.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	7.50	4.70	4.12	4.00	✓	2.00	32	25
D	One lane plus flare				10.00	5.75	3.00	2.20	2.20	✓	1.00	23	22

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	718.741	-	-	-	-	-	-	0.253	0.361	0.253	-	-	-
1	B-A	570.978	0.094	0.239	0.239	-	-	-	0.150	0.341	-	0.239	0.239	0.119
1	B-C	638.882	0.089	0.225	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	499.621	0.083	0.209	0.209	-	-	-	0.131	0.299	0.131	-	-	-
1	B-D, offside lane	570.978	0.094	0.239	0.239	-	-	-	0.150	0.341	0.150	-	-	-
1	C-B	718.741	0.253	0.253	0.361	-	-	-	-	-	-	-	-	-
1	D-A	697.649	-	-	-	-	-	-	0.246	-	0.097	-	-	-
1	D-B, nearside lane	542.408	0.143	0.143	0.324	-	-	-	0.227	0.227	0.090	-	-	-
1	D-B, offside lane	542.408	0.143	0.143	0.324	-	-	-	0.227	0.227	0.090	-	-	-
1	D-C	542.408	-	0.143	0.324	0.113	0.227	0.227	0.227	0.227	0.090	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	140.30	100.000
B	ONE HOUR	✓	153.90	100.000
C	ONE HOUR	✓	159.00	100.000
D	ONE HOUR	✓	78.90	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowinPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:30-07:45	A	105.63	105.63		
07:30-07:45	B	115.86	115.86		
07:30-07:45	C	119.70	119.70		
07:30-07:45	D	59.40	59.40		
07:45-08:00	A	126.13	126.13		
07:45-08:00	B	138.35	138.35		
07:45-08:00	C	142.94	142.94		
07:45-08:00	D	70.93	70.93		
08:00-08:15	A	154.47	154.47		
08:00-08:15	B	169.45	169.45		
08:00-08:15	C	175.06	175.06		
08:00-08:15	D	86.87	86.87		
08:15-08:30	A	154.47	154.47		
08:15-08:30	B	169.45	169.45		
08:15-08:30	C	175.06	175.06		
08:15-08:30	D	86.87	86.87		
08:30-08:45	A	126.13	126.13		
08:30-08:45	B	138.35	138.35		
08:30-08:45	C	142.94	142.94		
08:30-08:45	D	70.93	70.93		
08:45-09:00	A	105.63	105.63		
08:45-09:00	B	115.86	115.86		
08:45-09:00	C	119.70	119.70		
08:45-09:00	D	59.40	59.40		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	76.000	54.000	10.300
	B	106.000	0.000	23.000	24.900
	C	64.000	83.000	0.000	12.000
	D	17.500	54.000	7.400	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.54	0.38	0.07
	B	0.69	0.00	0.15	0.16
	C	0.40	0.52	0.00	0.08
	D	0.22	0.68	0.09	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.09	7.97	0.09	A
B-AD	0.26	10.04	0.35	B
A-BCD	0.02	5.50	0.02	A
A-B	-	-	-	-
A-C	-	-	-	-
D-AB	0.09	7.48	0.10	A
D-BC	0.08	8.19	0.08	A
C-ABD	0.14	6.08	0.16	A
C-D	-	-	-	-
C-A	-	-	-	-

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	28.15	27.92	0.00	524.47	0.054	0.06	7.246	A
B-AD	87.71	86.90	0.00	512.99	0.171	0.20	8.433	A
A-BCD	7.77	7.72	0.00	682.37	0.011	0.01	5.335	A
A-B	57.21	57.21	0.00	-	-	-	-	-
A-C	40.65	40.65	0.00	-	-	-	-	-
D-AB	33.73	33.47	0.00	551.65	0.061	0.06	6.944	A
D-BC	25.67	25.45	0.00	497.89	0.052	0.05	7.616	A
C-ABD	62.95	62.56	0.00	694.35	0.091	0.10	5.694	A
C-D	8.96	8.96	0.00	-	-	-	-	-
C-A	47.79	47.79	0.00	-	-	-	-	-

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	34.02	33.96	0.00	512.03	0.066	0.07	7.530	A
B-AD	104.34	104.11	0.00	501.44	0.208	0.26	9.056	A
A-BCD	9.28	9.27	0.00	675.34	0.014	0.01	5.404	A
A-B	68.31	68.31	0.00	-	-	-	-	-
A-C	48.54	48.54	0.00	-	-	-	-	-
D-AB	40.34	40.28	0.00	542.98	0.074	0.08	7.161	A
D-BC	30.59	30.54	0.00	489.02	0.063	0.07	7.850	A
C-ABD	75.42	75.33	0.00	690.39	0.109	0.12	5.853	A
C-D	10.66	10.66	0.00	-	-	-	-	-
C-A	56.85	56.85	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	42.36	42.27	0.00	494.39	0.086	0.09	7.959	A
B-AD	127.09	126.73	0.00	485.68	0.262	0.35	10.019	B
A-BCD	11.38	11.37	0.00	665.90	0.017	0.02	5.499	A
A-B	83.65	83.65	0.00	-	-	-	-	-
A-C	59.44	59.44	0.00	-	-	-	-	-
D-AB	49.52	49.43	0.00	531.00	0.093	0.10	7.475	A
D-BC	37.35	37.28	0.00	476.85	0.078	0.08	8.189	A
C-ABD	92.90	92.77	0.00	685.38	0.136	0.16	6.073	A
C-D	12.97	12.97	0.00	-	-	-	-	-
C-A	69.19	69.19	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	42.37	42.37	0.00	494.20	0.086	0.09	7.967	A
B-AD	127.08	127.07	0.00	485.60	0.262	0.35	10.040	B
A-BCD	11.38	11.38	0.00	665.85	0.017	0.02	5.500	A
A-B	83.65	83.65	0.00	-	-	-	-	-
A-C	59.44	59.44	0.00	-	-	-	-	-
D-AB	49.52	49.52	0.00	530.95	0.093	0.10	7.476	A
D-BC	37.35	37.35	0.00	476.80	0.078	0.08	8.191	A
C-ABD	92.90	92.90	0.00	685.38	0.136	0.16	6.075	A
C-D	12.97	12.97	0.00	-	-	-	-	-
C-A	69.19	69.19	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	34.03	34.12	0.00	511.72	0.067	0.07	7.538	A
B-AD	104.32	104.67	0.00	501.31	0.208	0.27	9.085	A
A-BCD	9.28	9.29	0.00	675.26	0.014	0.01	5.407	A
A-B	68.31	68.31	0.00	-	-	-	-	-
A-C	48.54	48.54	0.00	-	-	-	-	-
D-AB	40.34	40.43	0.00	542.89	0.074	0.08	7.167	A
D-BC	30.59	30.65	0.00	488.94	0.063	0.07	7.856	A
C-ABD	75.42	75.56	0.00	690.38	0.109	0.12	5.856	A
C-D	10.66	10.66	0.00	-	-	-	-	-
C-A	56.85	56.85	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	28.17	28.23	0.00	523.97	0.054	0.06	7.264	A
B-AD	87.70	87.93	0.00	512.71	0.171	0.21	8.479	A
A-BCD	7.77	7.78	0.00	682.19	0.011	0.01	5.337	A
A-B	57.21	57.21	0.00	-	-	-	-	-
A-C	40.65	40.65	0.00	-	-	-	-	-
D-AB	33.74	33.80	0.00	551.47	0.061	0.07	6.956	A
D-BC	25.66	25.71	0.00	497.71	0.052	0.05	7.630	A
C-ABD	62.95	63.05	0.00	694.33	0.091	0.10	5.705	A
C-D	8.96	8.96	0.00	-	-	-	-	-
C-A	47.79	47.79	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, PM	2023 Base	PM		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	A5 Treban	Crossroads	Two-way	A,B,C,D	8.39	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	A4080		Minor
C	C	A5W		Major
D	D	B5112		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	8.10		0.00		2.20	250.00	✓	1.00
C	8.10		0.00		2.20	250.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	7.50	4.70	4.12	4.00	✓	2.00	32	25
D	One lane plus flare				10.00	5.75	3.00	2.20	2.20	✓	1.00	23	22

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	718.741	-	-	-	-	-	-	0.253	0.361	0.253	-	-	-
1	B-A	535.300	0.089	0.224	0.224	-	-	-	0.141	0.320	-	0.224	0.224	0.112
1	B-C	684.505	0.095	0.241	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	535.300	0.089	0.224	0.224	-	-	-	0.141	0.320	0.141	-	-	-
1	B-D, offside lane	535.300	0.089	0.224	0.224	-	-	-	0.141	0.320	0.141	-	-	-
1	C-B	718.741	0.253	0.253	0.361	-	-	-	-	-	-	-	-	-
1	D-A	697.649	-	-	-	-	-	-	0.246	-	0.097	-	-	-
1	D-B, nearside lane	542.408	0.143	0.143	0.324	-	-	-	0.227	0.227	0.090	-	-	-
1	D-B, offside lane	542.408	0.143	0.143	0.324	-	-	-	0.227	0.227	0.090	-	-	-
1	D-C	542.408	-	0.143	0.324	0.113	0.227	0.227	0.227	0.227	0.090	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	175.00	100.000
B	ONE HOUR	✓	207.00	100.000
C	ONE HOUR	✓	83.00	100.000
D	ONE HOUR	✓	45.10	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	A	131.75	131.75		
16:15-16:30	B	155.84	155.84		
16:15-16:30	C	62.49	62.49		
16:15-16:30	D	33.95	33.95		
16:30-16:45	A	157.32	157.32		
16:30-16:45	B	186.09	186.09		
16:30-16:45	C	74.62	74.62		
16:30-16:45	D	40.54	40.54		
16:45-17:00	A	192.68	192.68		
16:45-17:00	B	227.91	227.91		
16:45-17:00	C	91.38	91.38		
16:45-17:00	D	49.66	49.66		
17:00-17:15	A	192.68	192.68		
17:00-17:15	B	227.91	227.91		
17:00-17:15	C	91.38	91.38		
17:00-17:15	D	49.66	49.66		
17:15-17:30	A	157.32	157.32		
17:15-17:30	B	186.09	186.09		
17:15-17:30	C	74.62	74.62		
17:15-17:30	D	40.54	40.54		
17:30-17:45	A	131.75	131.75		
17:30-17:45	B	155.84	155.84		
17:30-17:45	C	62.49	62.49		
17:30-17:45	D	33.95	33.95		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	86.000	77.000	12.000
	B	87.000	0.000	67.000	53.000
	C	44.000	27.000	0.000	12.000
	D	5.600	30.000	9.500	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.49	0.44	0.07
	B	0.42	0.00	0.32	0.26
	C	0.53	0.33	0.00	0.14
	D	0.12	0.67	0.21	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.20	8.14	0.24	A
B-AD	0.25	9.99	0.33	A
A-BCD	0.02	5.28	0.02	A
A-B	-	-	-	-
A-C	-	-	-	-
D-AB	0.04	7.16	0.05	A
D-BC	0.06	7.90	0.06	A
C-ABD	0.04	5.62	0.05	A
C-D	-	-	-	-
C-A	-	-	-	-

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	73.02	72.45	0.00	578.57	0.126	0.14	7.106	A
B-AD	82.82	82.03	0.00	497.62	0.166	0.20	8.646	A
A-BCD	9.05	9.00	0.00	701.69	0.013	0.01	5.197	A
A-B	64.73	64.73	0.00	-	-	-	-	-
A-C	57.96	57.96	0.00	-	-	-	-	-
D-AB	15.67	15.56	0.00	542.42	0.029	0.03	6.830	A
D-BC	18.28	18.13	0.00	501.53	0.036	0.04	7.445	A
C-ABD	20.36	20.24	0.00	685.20	0.030	0.03	5.414	A
C-D	9.03	9.03	0.00	-	-	-	-	-
C-A	33.10	33.10	0.00	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	87.90	87.74	0.00	567.03	0.155	0.18	7.509	A
B-AD	98.19	97.99	0.00	490.04	0.200	0.25	9.177	A
A-BCD	10.82	10.81	0.00	698.57	0.015	0.02	5.233	A
A-B	77.29	77.29	0.00	-	-	-	-	-
A-C	69.20	69.20	0.00	-	-	-	-	-
D-AB	18.76	18.73	0.00	535.44	0.035	0.04	6.966	A
D-BC	21.78	21.75	0.00	493.38	0.044	0.05	7.632	A
C-ABD	24.34	24.31	0.00	678.87	0.036	0.04	5.499	A
C-D	10.77	10.77	0.00	-	-	-	-	-
C-A	39.50	39.50	0.00	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	108.83	108.59	0.00	550.97	0.198	0.24	8.134	A
B-AD	119.08	118.76	0.00	479.46	0.248	0.33	9.971	A
A-BCD	13.28	13.26	0.00	694.44	0.019	0.02	5.284	A
A-B	94.65	94.65	0.00	-	-	-	-	-
A-C	84.75	84.75	0.00	-	-	-	-	-
D-AB	23.05	23.02	0.00	525.82	0.044	0.05	7.159	A
D-BC	26.60	26.55	0.00	482.23	0.055	0.06	7.899	A
C-ABD	29.85	29.81	0.00	670.25	0.045	0.05	5.620	A
C-D	13.19	13.19	0.00	-	-	-	-	-
C-A	48.35	48.35	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	108.85	108.84	0.00	550.83	0.198	0.24	8.144	A
B-AD	119.06	119.05	0.00	479.42	0.248	0.33	9.989	A
A-BCD	13.28	13.28	0.00	694.43	0.019	0.02	5.284	A
A-B	94.65	94.65	0.00	-	-	-	-	-
A-C	84.75	84.75	0.00	-	-	-	-	-
D-AB	23.06	23.05	0.00	525.80	0.044	0.05	7.159	A
D-BC	26.60	26.60	0.00	482.18	0.055	0.06	7.901	A
C-ABD	29.85	29.85	0.00	670.25	0.045	0.05	5.620	A
C-D	13.19	13.19	0.00	-	-	-	-	-
C-A	48.35	48.35	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	87.92	88.16	0.00	566.80	0.155	0.19	7.527	A
B-AD	98.17	98.47	0.00	489.99	0.200	0.25	9.201	A
A-BCD	10.82	10.84	0.00	698.55	0.015	0.02	5.236	A
A-B	77.29	77.29	0.00	-	-	-	-	-
A-C	69.20	69.20	0.00	-	-	-	-	-
D-AB	18.76	18.80	0.00	535.39	0.035	0.04	6.971	A
D-BC	21.78	21.83	0.00	493.29	0.044	0.05	7.638	A
C-ABD	24.34	24.37	0.00	678.86	0.036	0.04	5.500	A
C-D	10.77	10.77	0.00	-	-	-	-	-
C-A	39.50	39.50	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	73.06	73.21	0.00	578.16	0.126	0.15	7.130	A
B-AD	82.78	82.99	0.00	497.49	0.166	0.20	8.690	A
A-BCD	9.05	9.07	0.00	701.64	0.013	0.01	5.199	A
A-B	64.73	64.73	0.00	-	-	-	-	-
A-C	57.96	57.96	0.00	-	-	-	-	-
D-AB	15.68	15.70	0.00	542.31	0.029	0.03	6.838	A
D-BC	18.28	18.31	0.00	501.35	0.036	0.04	7.455	A
C-ABD	20.36	20.39	0.00	685.18	0.030	0.03	5.417	A
C-D	9.03	9.03	0.00	-	-	-	-	-
C-A	33.10	33.10	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, AM	2023 Base + Dev	AM		ONE HOUR	07:30	09:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	A5 Treban	Crossroads	Two-way	A,B,C,D	8.43	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	A4080		Minor
C	C	A5W		Major
D	D	B5112		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	8.10		0.00		2.20	250.00	✓	1.00
C	8.10		0.00		2.20	250.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	7.50	4.70	4.12	4.00	✓	2.00	32	25
D	One lane plus flare				10.00	5.75	3.00	2.20	2.20	✓	1.00	23	22

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	718.741	-	-	-	-	-	-	0.253	0.361	0.253	-	-	-
1	B-A	560.459	0.093	0.234	0.234	-	-	-	0.147	0.335	-	0.234	0.234	0.117
1	B-C	652.333	0.091	0.230	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	510.140	0.084	0.213	0.213	-	-	-	0.134	0.305	0.134	-	-	-
1	B-D, offside lane	560.459	0.093	0.234	0.234	-	-	-	0.147	0.335	0.147	-	-	-
1	C-B	718.741	0.253	0.253	0.361	-	-	-	-	-	-	-	-	-
1	D-A	697.649	-	-	-	-	-	-	0.246	-	0.097	-	-	-
1	D-B, nearside lane	542.408	0.143	0.143	0.324	-	-	-	0.227	0.227	0.090	-	-	-
1	D-B, offside lane	542.408	0.143	0.143	0.324	-	-	-	0.227	0.227	0.090	-	-	-
1	D-C	542.408	-	0.143	0.324	0.113	0.227	0.227	0.227	0.227	0.090	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	140.00	100.000
B	ONE HOUR	✓	170.00	100.000
C	ONE HOUR	✓	158.00	100.000
D	ONE HOUR	✓	95.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowinPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:30-07:45	A	105.40	105.40		
07:30-07:45	B	127.98	127.98		
07:30-07:45	C	118.95	118.95		
07:30-07:45	D	71.52	71.52		
07:45-08:00	A	125.86	125.86		
07:45-08:00	B	152.83	152.83		
07:45-08:00	C	142.04	142.04		
07:45-08:00	D	85.40	85.40		
08:00-08:15	A	154.14	154.14		
08:00-08:15	B	187.17	187.17		
08:00-08:15	C	173.96	173.96		
08:00-08:15	D	104.60	104.60		
08:15-08:30	A	154.14	154.14		
08:15-08:30	B	187.17	187.17		
08:15-08:30	C	173.96	173.96		
08:15-08:30	D	104.60	104.60		
08:30-08:45	A	125.86	125.86		
08:30-08:45	B	152.83	152.83		
08:30-08:45	C	142.04	142.04		
08:30-08:45	D	85.40	85.40		
08:45-09:00	A	105.40	105.40		
08:45-09:00	B	127.98	127.98		
08:45-09:00	C	118.95	118.95		
08:45-09:00	D	71.52	71.52		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	76.000	54.000	10.000
	B	106.000	0.000	23.000	41.000
	C	63.000	83.000	0.000	12.000
	D	18.000	70.000	7.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.54	0.39	0.07
	B	0.62	0.00	0.14	0.24
	C	0.40	0.53	0.00	0.08
	D	0.19	0.74	0.07	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.11	8.43	0.12	A
B-AD	0.28	10.58	0.39	B
A-BCD	0.02	5.49	0.02	A
A-B	-	-	-	-
A-C	-	-	-	-
D-AB	0.11	7.82	0.13	A
D-BC	0.10	8.35	0.11	A
C-ABD	0.14	6.07	0.16	A
C-D	-	-	-	-
C-A	-	-	-	-

Main Results for each time segment

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	35.21	34.92	0.00	513.42	0.069	0.07	7.518	A
B-AD	92.77	91.87	0.00	501.78	0.185	0.22	8.762	A
A-BCD	7.54	7.50	0.00	682.54	0.011	0.01	5.332	A
A-B	57.21	57.21	0.00	-	-	-	-	-
A-C	40.65	40.65	0.00	-	-	-	-	-
D-AB	40.19	39.87	0.00	541.51	0.074	0.08	7.171	A
D-BC	31.34	31.07	0.00	498.01	0.063	0.07	7.706	A
C-ABD	62.95	62.55	0.00	694.39	0.091	0.10	5.693	A
C-D	8.96	8.96	0.00	-	-	-	-	-
C-A	47.04	47.04	0.00	-	-	-	-	-

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	42.74	42.66	0.00	499.83	0.086	0.09	7.874	A
B-AD	110.09	109.84	0.00	490.04	0.225	0.29	9.463	A
A-BCD	9.01	9.00	0.00	675.54	0.013	0.01	5.400	A
A-B	68.31	68.31	0.00	-	-	-	-	-
A-C	48.54	48.54	0.00	-	-	-	-	-
D-AB	48.06	47.99	0.00	532.31	0.090	0.10	7.433	A
D-BC	37.34	37.28	0.00	489.11	0.076	0.08	7.966	A
C-ABD	75.41	75.32	0.00	690.42	0.109	0.12	5.852	A
C-D	10.66	10.66	0.00	-	-	-	-	-
C-A	55.97	55.97	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	53.53	53.40	0.00	480.65	0.111	0.12	8.423	A
B-AD	133.64	133.24	0.00	473.95	0.282	0.39	10.553	B
A-BCD	11.05	11.04	0.00	666.13	0.017	0.02	5.494	A
A-B	83.65	83.65	0.00	-	-	-	-	-
A-C	59.44	59.44	0.00	-	-	-	-	-
D-AB	59.00	58.89	0.00	519.60	0.114	0.13	7.812	A
D-BC	45.60	45.51	0.00	476.83	0.096	0.10	8.344	A
C-ABD	92.88	92.74	0.00	685.41	0.136	0.16	6.072	A
C-D	12.97	12.97	0.00	-	-	-	-	-
C-A	68.11	68.11	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	53.55	53.54	0.00	480.41	0.111	0.12	8.433	A
B-AD	133.63	133.61	0.00	473.88	0.282	0.39	10.579	B
A-BCD	11.05	11.05	0.00	666.08	0.017	0.02	5.495	A
A-B	83.65	83.65	0.00	-	-	-	-	-
A-C	59.44	59.44	0.00	-	-	-	-	-
D-AB	59.00	59.00	0.00	519.54	0.114	0.13	7.816	A
D-BC	45.60	45.59	0.00	476.77	0.096	0.11	8.348	A
C-ABD	92.88	92.88	0.00	685.41	0.136	0.16	6.075	A
C-D	12.97	12.97	0.00	-	-	-	-	-
C-A	68.11	68.11	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	42.76	42.88	0.00	499.45	0.086	0.09	7.888	A
B-AD	110.07	110.45	0.00	489.94	0.225	0.29	9.497	A
A-BCD	9.01	9.02	0.00	675.45	0.013	0.01	5.403	A
A-B	68.31	68.31	0.00	-	-	-	-	-
A-C	48.54	48.54	0.00	-	-	-	-	-
D-AB	48.07	48.17	0.00	532.21	0.090	0.10	7.438	A
D-BC	37.34	37.42	0.00	489.02	0.076	0.08	7.974	A
C-ABD	75.41	75.55	0.00	690.42	0.109	0.12	5.857	A
C-D	10.66	10.66	0.00	-	-	-	-	-
C-A	55.97	55.97	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	35.25	35.33	0.00	512.81	0.069	0.07	7.542	A
B-AD	92.74	92.99	0.00	501.52	0.185	0.23	8.817	A
A-BCD	7.54	7.55	0.00	682.36	0.011	0.01	5.336	A
A-B	57.21	57.21	0.00	-	-	-	-	-
A-C	40.65	40.65	0.00	-	-	-	-	-
D-AB	40.19	40.27	0.00	541.30	0.074	0.08	7.188	A
D-BC	31.33	31.39	0.00	497.83	0.063	0.07	7.720	A
C-ABD	62.95	63.04	0.00	694.37	0.091	0.10	5.702	A
C-D	8.96	8.96	0.00	-	-	-	-	-
C-A	47.04	47.04	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, PM	2023 Base + Dev	PM		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	A5 Treban	Crossroads	Two-way	A,B,C,D	8.83	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	A4080		Minor
C	C	A5W		Major
D	D	B5112		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	8.10		0.00		2.20	250.00	✓	1.00
C	8.10		0.00		2.20	250.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	7.50	4.70	4.12	4.00	✓	2.00	32	25
D	One lane plus flare				10.00	5.75	3.00	2.20	2.20	✓	1.00	23	22

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	718.741	-	-	-	-	-	-	0.253	0.361	0.253	-	-	-
1	B-A	535.300	0.089	0.224	0.224	-	-	-	0.141	0.320	-	0.224	0.224	0.112
1	B-C	684.505	0.095	0.241	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	535.300	0.089	0.224	0.224	-	-	-	0.141	0.320	0.141	-	-	-
1	B-D, offside lane	535.300	0.089	0.224	0.224	-	-	-	0.141	0.320	0.141	-	-	-
1	C-B	718.741	0.253	0.253	0.361	-	-	-	-	-	-	-	-	-
1	D-A	697.649	-	-	-	-	-	-	0.246	-	0.097	-	-	-
1	D-B, nearside lane	542.408	0.143	0.143	0.324	-	-	-	0.227	0.227	0.090	-	-	-
1	D-B, offside lane	542.408	0.143	0.143	0.324	-	-	-	0.227	0.227	0.090	-	-	-
1	D-C	542.408	-	0.143	0.324	0.113	0.227	0.227	0.227	0.227	0.090	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	175.00	100.000
B	ONE HOUR	✓	233.00	100.000
C	ONE HOUR	✓	83.00	100.000
D	ONE HOUR	✓	61.30	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	A	131.75	131.75		
16:15-16:30	B	175.41	175.41		
16:15-16:30	C	62.49	62.49		
16:15-16:30	D	46.15	46.15		
16:30-16:45	A	157.32	157.32		
16:30-16:45	B	209.46	209.46		
16:30-16:45	C	74.62	74.62		
16:30-16:45	D	55.11	55.11		
16:45-17:00	A	192.68	192.68		
16:45-17:00	B	256.54	256.54		
16:45-17:00	C	91.38	91.38		
16:45-17:00	D	67.49	67.49		
17:00-17:15	A	192.68	192.68		
17:00-17:15	B	256.54	256.54		
17:00-17:15	C	91.38	91.38		
17:00-17:15	D	67.49	67.49		
17:15-17:30	A	157.32	157.32		
17:15-17:30	B	209.46	209.46		
17:15-17:30	C	74.62	74.62		
17:15-17:30	D	55.11	55.11		
17:30-17:45	A	131.75	131.75		
17:30-17:45	B	175.41	175.41		
17:30-17:45	C	62.49	62.49		
17:30-17:45	D	46.15	46.15		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	86.000	77.000	12.000
	B	87.000	0.000	67.000	79.000
	C	44.000	27.000	0.000	12.000
	D	6.000	46.000	9.300	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.49	0.44	0.07
	B	0.37	0.00	0.29	0.34
	C	0.53	0.33	0.00	0.14
	D	0.10	0.75	0.15	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.24	8.89	0.31	A
B-AD	0.27	10.41	0.37	B
A-BCD	0.02	5.28	0.02	A
A-B	-	-	-	-
A-C	-	-	-	-
D-AB	0.06	7.48	0.07	A
D-BC	0.07	8.04	0.08	A
C-ABD	0.04	5.62	0.05	A
C-D	-	-	-	-
C-A	-	-	-	-

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	84.12	83.42	0.00	560.73	0.150	0.17	7.531	A
B-AD	91.29	90.40	0.00	495.93	0.184	0.22	8.858	A
A-BCD	9.05	9.00	0.00	701.69	0.013	0.01	5.197	A
A-B	64.73	64.73	0.00	-	-	-	-	-
A-C	57.96	57.96	0.00	-	-	-	-	-
D-AB	22.08	21.91	0.00	531.21	0.042	0.04	7.067	A
D-BC	24.07	23.87	0.00	502.03	0.048	0.05	7.525	A
C-ABD	20.36	20.24	0.00	685.20	0.030	0.03	5.414	A
C-D	9.03	9.03	0.00	-	-	-	-	-
C-A	33.10	33.10	0.00	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	101.51	101.31	0.00	548.38	0.185	0.22	8.049	A
B-AD	107.96	107.73	0.00	487.86	0.221	0.28	9.464	A
A-BCD	10.82	10.81	0.00	698.57	0.015	0.02	5.233	A
A-B	77.29	77.29	0.00	-	-	-	-	-
A-C	69.20	69.20	0.00	-	-	-	-	-
D-AB	26.44	26.40	0.00	523.74	0.050	0.05	7.238	A
D-BC	28.67	28.63	0.00	493.95	0.058	0.06	7.735	A
C-ABD	24.34	24.31	0.00	678.87	0.036	0.04	5.499	A
C-D	10.77	10.77	0.00	-	-	-	-	-
C-A	39.50	39.50	0.00	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	126.11	125.78	0.00	531.11	0.237	0.31	8.874	A
B-AD	130.43	130.06	0.00	476.37	0.274	0.37	10.383	B
A-BCD	13.28	13.26	0.00	694.44	0.019	0.02	5.284	A
A-B	94.65	94.65	0.00	-	-	-	-	-
A-C	84.75	84.75	0.00	-	-	-	-	-
D-AB	32.50	32.44	0.00	513.45	0.063	0.07	7.484	A
D-BC	34.99	34.93	0.00	482.86	0.072	0.08	8.036	A
C-ABD	29.85	29.81	0.00	670.25	0.045	0.05	5.620	A
C-D	13.19	13.19	0.00	-	-	-	-	-
C-A	48.35	48.35	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	126.14	126.13	0.00	530.95	0.238	0.31	8.892	A
B-AD	130.40	130.39	0.00	476.32	0.274	0.37	10.406	B
A-BCD	13.28	13.28	0.00	694.43	0.019	0.02	5.284	A
A-B	94.65	94.65	0.00	-	-	-	-	-
A-C	84.75	84.75	0.00	-	-	-	-	-
D-AB	32.50	32.50	0.00	513.41	0.063	0.07	7.484	A
D-BC	34.99	34.99	0.00	482.80	0.072	0.08	8.038	A
C-ABD	29.85	29.85	0.00	670.25	0.045	0.05	5.620	A
C-D	13.19	13.19	0.00	-	-	-	-	-
C-A	48.35	48.35	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	101.54	101.86	0.00	548.11	0.185	0.23	8.072	A
B-AD	107.92	108.27	0.00	487.78	0.221	0.29	9.496	A
A-BCD	10.82	10.84	0.00	698.55	0.015	0.02	5.236	A
A-B	77.29	77.29	0.00	-	-	-	-	-
A-C	69.20	69.20	0.00	-	-	-	-	-
D-AB	26.44	26.49	0.00	523.68	0.050	0.05	7.240	A
D-BC	28.67	28.73	0.00	493.86	0.058	0.06	7.740	A
C-ABD	24.34	24.37	0.00	678.86	0.036	0.04	5.500	A
C-D	10.77	10.77	0.00	-	-	-	-	-
C-A	39.50	39.50	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	84.17	84.38	0.00	560.27	0.150	0.18	7.570	A
B-AD	91.24	91.48	0.00	495.78	0.184	0.23	8.911	A
A-BCD	9.05	9.07	0.00	701.64	0.013	0.01	5.199	A
A-B	64.73	64.73	0.00	-	-	-	-	-
A-C	57.96	57.96	0.00	-	-	-	-	-
D-AB	22.09	22.12	0.00	531.08	0.042	0.04	7.075	A
D-BC	24.06	24.11	0.00	501.85	0.048	0.05	7.535	A
C-ABD	20.36	20.39	0.00	685.18	0.030	0.03	5.417	A
C-D	9.03	9.03	0.00	-	-	-	-	-
C-A	33.10	33.10	0.00	-	-	-	-	-

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A55J5_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A55 J5
Report generation date: 31/05/2018 11:17:49

» (Default Analysis Set) - 2017 Base, AM
» (Default Analysis Set) - 2017 Base, PM
» (Default Analysis Set) - 2023 Base, AM
» (Default Analysis Set) - 2023 Base, PM
» (Default Analysis Set) - 2023 Base + Dev, AM
» (Default Analysis Set) - 2023 Base + Dev, PM

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2017 Base			
Junction 1 - Arm 4080N	0.17	3.30	0.15	A
Junction 1 - Arm WBOFF	0.05	2.34	0.05	A
Junction 1 - Arm 4080S	0.22	3.21	0.18	A
Junction 2 - Arm 4080N	0.19	2.98	0.16	A
Junction 2 - Arm 4080S	0.16	3.22	0.14	A
Junction 2 - Arm EBOFF	0.09	2.44	0.08	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:00 - 17:30
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:00 - 17:30
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:00 - 17:30

Run using Junctions 8.0.6.541 at 31/05/2018 11:17:41

File summary

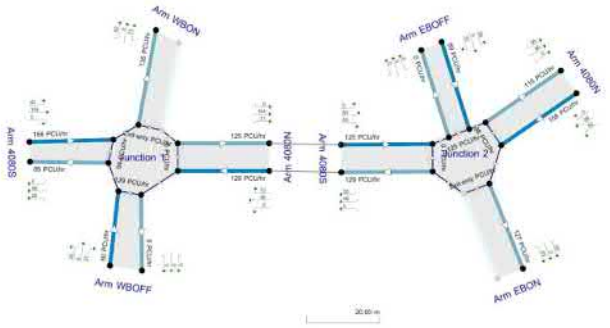
Title	(untitled)
Location	
Site Number	
Date	14/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction 1 - Arm 4080N	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 2 - Arm 4080S	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, AM	2017 Base	AM		Varies by Arm	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	1	A55J5 WB	Roundabout	4080N,WBOFF,4080S,WBON			3.12	A
2	2	A55J5 EB	Roundabout	4080N,EBON,4080S,EBOFF			2.93	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description
1	**4080N**	4080N	(untitled)	
1	**WBOFF**	WBOFF	(untitled)	
1	**4080S**	4080S	(untitled)	
1	**WBON**	WBON	(untitled)	
2	**4080N**	4080N	(untitled)	
2	**EBON**	EBON	(untitled)	
2	**4080S**	4080S	(untitled)	
2	**EBOFF**	EBOFF	(untitled)	

Capacity Options

Junction	Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	**4080N**	0.00	99999.00
1	**WBOFF**	0.00	99999.00
1	**4080S**	0.00	99999.00
1	**WBON**	0.00	99999.00
2	**4080N**	0.00	99999.00
2	**EBON**	0.00	99999.00
2	**4080S**	0.00	99999.00
2	**EBOFF**	0.00	99999.00

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	**4080N**	2.70	6.40	9.00	14.70	37.00	30.00	
1	**WBOFF**	5.40	6.90	2.40	21.00	37.00	39.00	
1	**4080S**	3.70	6.10	10.50	21.00	37.00	49.00	
1	**WBON**	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	**4080N**	3.70	6.30	9.50	24.00	36.00	35.00	
2	**EBON**	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	**4080S**	3.60	4.60	8.60	20.00	36.00	32.00	
2	**EBOFF**	5.00	5.90	3.70	96.00	36.00	31.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	**4080N**		(calculated)	(calculated)	0.558	1279.301
1	**WBOFF**		(calculated)	(calculated)	0.647	1736.033
1	**4080S**		(calculated)	(calculated)	0.577	1443.084
1	**WBON**		(calculated)	(calculated)	Exit-only	Exit-only
2	**4080N**		(calculated)	(calculated)	0.612	1526.905
2	**EBON**		(calculated)	(calculated)	Exit-only	Exit-only
2	**4080S**		(calculated)	(calculated)	0.567	1302.528
2	**EBOFF**		(calculated)	(calculated)	0.666	1727.138

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	**4080N**	Linked Arm		N/A	
1	**WBOFF**	ONE HOUR	✓	67.00	100.000
1	**4080S**	ONE HOUR	✓	221.00	100.000
1	**WBON**	Exit-only	✓	Exit-only	Exit-only
2	**4080N**	ONE HOUR	✓	210.00	100.000
2	**EBON**	Exit-only	✓	Exit-only	Exit-only
2	**4080S**	Linked Arm		N/A	
2	**EBOFF**	ONE HOUR	✓	118.00	100.000

Linked Arm Data

Junction	Arm	From Junction ID	From Arm ID	Link Type	Flow Source	Uniform Flow (PCU/hr)	Flow Multiplier (%)	Internal Storage Space (PCU)
1	4080N	2	4080S	Simple (vertical queueing)	Normal	0.00	100.00	
2	4080S	1	4080N	Simple (vertical queueing)	Normal	0.00	100.00	

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		4080N	WBOFF	4080S	WBON
From	4080N	0.000	0.000	74.000	97.000
	WBOFF	28.000	0.000	39.000	0.000
	4080S	139.000	0.000	0.000	82.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		4080N	WBOFF	4080S	WBON
From	4080N	0.00	0.00	0.43	0.57
	WBOFF	0.42	0.00	0.58	0.00
	4080S	0.63	0.00	0.00	0.37
	WBON	0.25	0.25	0.25	0.25

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Counts / Proportions (PCU/hr) - Junction 2 (for whole period)

		To			
		4080N	EBON	4080S	EBOFF
From	4080N	0.000	82.000	128.000	0.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	4080S	80.000	87.000	0.000	0.000
	EBOFF	74.000	0.000	44.000	0.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 2 (for whole period)

		To			
		4080N	EBON	4080S	EBOFF
From	4080N	0.00	0.39	0.61	0.00
	EBON	0.25	0.25	0.25	0.25
	4080S	0.48	0.52	0.00	0.00
	EBOFF	0.63	0.00	0.37	0.00

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		4080N	WBOFF	4080S	WBON
From	4080N	1.000	1.000	1.000	1.000
	WBOFF	1.000	1.000	1.000	1.000
	4080S	1.000	1.000	1.000	1.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		4080N	WBOFF	4080S	WBON
From	4080N	0.0	0.0	0.0	0.0
	WBOFF	0.0	0.0	0.0	0.0
	4080S	0.0	0.0	0.0	0.0
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Average PCU Per Vehicle - Junction 2 (for whole period)

		To			
		4080N	EBON	4080S	EBOFF
From	4080N	1.000	1.000	1.000	1.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	4080S	1.000	1.000	1.000	1.000
	EBOFF	1.000	1.000	1.000	1.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 2 (for whole period)

		To			
		4080N	EBON	4080S	EBOFF
From	4080N	0.0	0.0	0.0	0.0
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	4080S	0.0	0.0	0.0	0.0
	EBOFF	0.0	0.0	0.0	0.0

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	4080N	0.15	3.30	0.17	A
1	WBOFF	0.05	2.34	0.05	A
1	4080S	0.18	3.21	0.22	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	0.16	2.98	0.19	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	0.14	3.22	0.16	A
2	EBOFF	0.08	2.44	0.09	A

Main Results for each time segment

Main results: (07:45-08:00)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	129.11	128.66	0.00	0.00	1279.30	0.101	0.11	3.129	A
1	WBOFF	50.44	50.32	128.66	0.00	1652.84	0.031	0.03	2.246	A
1	4080S	166.38	165.84	94.01	0.00	1388.84	0.120	0.14	2.941	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	158.10	157.62	98.11	0.00	1466.85	0.108	0.12	2.750	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	125.33	124.91	0.00	0.00	1302.53	0.096	0.11	3.057	A
2	EBOFF	88.84	88.61	124.91	0.00	1643.92	0.054	0.06	2.314	A

Main results: (08:00-08:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	154.54	154.44	0.00	0.00	1279.30	0.121	0.14	3.199	A
1	WBOFF	60.23	60.20	154.44	0.00	1636.17	0.037	0.04	2.283	A
1	4080S	198.67	198.55	112.76	0.00	1378.03	0.144	0.17	3.051	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	188.79	188.67	117.65	0.00	1454.89	0.130	0.15	2.842	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	150.04	149.94	0.00	0.00	1302.53	0.115	0.13	3.122	A
2	EBOFF	106.08	106.03	149.94	0.00	1627.25	0.065	0.07	2.366	A

Main results: (08:15-08:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	189.25	189.10	0.00	0.00	1279.30	0.148	0.17	3.301	A
1	WBOFF	73.77	73.73	189.10	0.00	1613.76	0.046	0.05	2.337	A
1	4080S	243.33	243.13	138.08	0.00	1363.42	0.178	0.22	3.213	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	231.21	231.05	144.06	0.00	1438.72	0.161	0.19	2.980	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	183.73	183.60	0.00	0.00	1302.53	0.141	0.16	3.216	A
2	EBOFF	129.92	129.85	183.60	0.00	1604.82	0.081	0.09	2.440	A

Main results: (08:30-08:45)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	189.37	189.37	0.00	0.00	1279.30	0.148	0.17	3.302	A
1	WBOFF	73.77	73.77	189.37	0.00	1613.58	0.046	0.05	2.337	A
1	4080S	243.33	243.32	138.25	0.00	1363.32	0.178	0.22	3.213	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	231.21	231.21	144.23	0.00	1438.62	0.161	0.19	2.980	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	183.87	183.87	0.00	0.00	1302.53	0.141	0.16	3.217	A
2	EBOFF	129.92	129.92	183.87	0.00	1604.64	0.081	0.09	2.440	A

Main results: (08:45-09:00)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	154.75	154.89	0.00	0.00	1279.30	0.121	0.14	3.201	A
1	WBOFF	60.23	60.27	154.89	0.00	1635.88	0.037	0.04	2.284	A
1	4080S	198.67	198.87	113.05	0.00	1377.86	0.144	0.17	3.053	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	188.79	188.95	117.93	0.00	1454.72	0.130	0.15	2.843	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	150.27	150.40	0.00	0.00	1302.53	0.115	0.13	3.126	A
2	EBOFF	106.08	106.15	150.40	0.00	1626.94	0.065	0.07	2.366	A

Main results: (09:00-09:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	129.58	129.68	0.00	0.00	1279.30	0.101	0.11	3.131	A
1	WBOFF	50.44	50.47	129.68	0.00	1652.18	0.031	0.03	2.247	A
1	4080S	166.38	166.51	94.65	0.00	1388.48	0.120	0.14	2.948	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	158.10	158.21	98.74	0.00	1466.46	0.108	0.12	2.751	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	125.82	125.91	0.00	0.00	1302.53	0.097	0.11	3.059	A
2	EBOFF	88.84	88.89	125.91	0.00	1643.25	0.054	0.06	2.317	A

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction 1 - Arm 4080N	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 2 - Arm 4080S	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, PM	2017 Base	PM		Varies by Arm	16:00	17:30	90	15		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	1	A55J5 WB	Roundabout	4080N,WBOFF,4080S,WBON			3.01	A
2	2	A55J5 EB	Roundabout	4080N,EBON,4080S,EBOFF			2.88	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description
1	4080N	4080N	(untitled)	
1	WBOFF	WBOFF	(untitled)	
1	4080S	4080S	(untitled)	
1	WBON	WBON	(untitled)	
2	4080N	4080N	(untitled)	
2	EBON	EBON	(untitled)	
2	4080S	4080S	(untitled)	
2	EBOFF	EBOFF	(untitled)	

Capacity Options

Junction	Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	4080N	0.00	99999.00
1	WBOFF	0.00	99999.00
1	4080S	0.00	99999.00
1	WBON	0.00	99999.00
2	4080N	0.00	99999.00
2	EBON	0.00	99999.00
2	4080S	0.00	99999.00
2	EBOFF	0.00	99999.00

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	4080N	2.70	6.40	9.00	14.70	37.00	30.00	
1	WBOFF	5.40	6.90	2.40	21.00	37.00	39.00	
1	4080S	3.70	6.10	10.50	21.00	37.00	49.00	
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	4080N	3.70	6.30	9.50	24.00	36.00	35.00	
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	4080S	3.60	4.60	8.60	20.00	36.00	32.00	
2	EBOFF	5.00	5.90	3.70	96.00	36.00	31.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	4080N		(calculated)	(calculated)	0.558	1279.301
1	WBOFF		(calculated)	(calculated)	0.647	1736.033
1	4080S		(calculated)	(calculated)	0.577	1443.084
1	WBON		(calculated)	(calculated)	Exit-only	Exit-only
2	4080N		(calculated)	(calculated)	0.612	1526.905
2	EBON		(calculated)	(calculated)	Exit-only	Exit-only
2	4080S		(calculated)	(calculated)	0.567	1302.528
2	EBOFF		(calculated)	(calculated)	0.666	1727.138

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	4080N	Linked Arm		N/A	
1	WBOFF	ONE HOUR	✓	158.00	100.000
1	4080S	ONE HOUR	✓	165.00	100.000
1	WBON	Exit-only	✓	Exit-only	Exit-only
2	4080N	ONE HOUR	✓	137.00	100.000
2	EBON	Exit-only	✓	Exit-only	Exit-only
2	4080S	Linked Arm		N/A	
2	EBOFF	ONE HOUR	✓	136.00	100.000

Linked Arm Data

Junction	Arm	From Junction ID	From Arm ID	Link Type	Flow Source	Uniform Flow (PCU/hr)	Flow Multiplier (%)	Internal Storage Space (PCU)
1	4080N	2	4080S	Simple (vertical queueing)	Normal	0.00	100.00	
2	4080S	1	4080N	Simple (vertical queueing)	Normal	0.00	100.00	

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		4080N	WBOFF	4080S	WBON
From	4080N	0.000	0.000	129.000	64.000
	WBOFF	77.000	0.000	81.000	0.000
	4080S	101.000	0.000	0.000	64.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		4080N	WBOFF	4080S	WBON
From	4080N	0.00	0.00	0.67	0.33
	WBOFF	0.49	0.00	0.51	0.00
	4080S	0.61	0.00	0.00	0.39
	WBON	0.25	0.25	0.25	0.25

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Counts / Proportions (PCU/hr) - Junction 2 (for whole period)

		To			
		4080N	EBON	4080S	EBOFF
From	4080N	0.000	31.000	106.000	0.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	4080S	146.000	42.000	0.000	0.000
	EBOFF	50.000	0.000	86.000	0.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 2 (for whole period)

		To			
		4080N	EBON	4080S	EBOFF
From	4080N	0.00	0.23	0.77	0.00
	EBON	0.25	0.25	0.25	0.25
	4080S	0.78	0.22	0.00	0.00
	EBOFF	0.37	0.00	0.63	0.00

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		4080N	WBOFF	4080S	WBON
From	4080N	1.000	1.000	1.000	1.000
	WBOFF	1.000	1.000	1.000	1.000
	4080S	1.000	1.000	1.000	1.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		4080N	WBOFF	4080S	WBON
From	4080N	0.0	0.0	0.0	0.0
	WBOFF	0.0	0.0	0.0	0.0
	4080S	0.0	0.0	0.0	0.0
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Average PCU Per Vehicle - Junction 2 (for whole period)

		To			
		4080N	EBON	4080S	EBOFF
From	4080N	1.000	1.000	1.000	1.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	4080S	1.000	1.000	1.000	1.000
	EBOFF	1.000	1.000	1.000	1.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 2 (for whole period)

		To			
		4080N	EBON	4080S	EBOFF
From	4080N	0.0	0.0	0.0	0.0
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	4080S	0.0	0.0	0.0	0.0
	EBOFF	0.0	0.0	0.0	0.0

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	4080N	0.17	3.37	0.20	A
1	WBOFF	0.11	2.52	0.12	A
1	4080S	0.13	3.07	0.15	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	0.10	2.79	0.12	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	0.15	3.25	0.18	A
2	EBOFF	0.09	2.49	0.10	A

Main Results for each time segment

Main results: (16:00-16:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	144.15	143.64	0.00	0.00	1279.30	0.113	0.13	3.168	A
1	WBOFF	118.95	118.64	143.64	0.00	1643.15	0.072	0.08	2.361	A
1	4080S	124.22	123.83	105.45	0.00	1382.25	0.090	0.10	2.861	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	103.14	102.84	94.33	0.00	1469.17	0.070	0.08	2.634	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	133.62	133.16	0.00	0.00	1302.53	0.103	0.11	3.079	A
2	EBOFF	102.39	102.12	133.16	0.00	1638.43	0.062	0.07	2.343	A

Main results: (16:15-16:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	172.51	172.40	0.00	0.00	1279.30	0.135	0.16	3.251	A
1	WBOFF	142.04	141.97	172.40	0.00	1624.56	0.087	0.10	2.427	A
1	4080S	148.33	148.24	126.36	0.00	1370.18	0.108	0.12	2.945	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	123.16	123.09	112.98	0.00	1457.75	0.084	0.09	2.696	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	159.93	159.83	0.00	0.00	1302.53	0.123	0.14	3.149	A
2	EBOFF	122.26	122.20	159.83	0.00	1620.66	0.075	0.08	2.402	A

Main results: (16:30-16:45)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	211.27	211.10	0.00	0.00	1279.30	0.165	0.20	3.369	A
1	WBOFF	173.96	173.86	211.10	0.00	1599.54	0.109	0.12	2.524	A
1	4080S	181.67	181.53	154.73	0.00	1353.81	0.134	0.15	3.070	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	150.84	150.74	138.35	0.00	1442.22	0.105	0.12	2.787	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	195.85	195.70	0.00	0.00	1302.53	0.150	0.18	3.252	A
2	EBOFF	149.74	149.65	195.70	0.00	1596.76	0.094	0.10	2.487	A

Main results: (16:45-17:00)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	211.39	211.39	0.00	0.00	1279.30	0.165	0.20	3.370	A
1	WBOFF	173.96	173.96	211.39	0.00	1599.35	0.109	0.12	2.525	A
1	4080S	181.67	181.67	154.88	0.00	1353.73	0.134	0.15	3.070	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	150.84	150.84	138.47	0.00	1442.15	0.105	0.12	2.787	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	195.98	195.98	0.00	0.00	1302.53	0.150	0.18	3.252	A
2	EBOFF	149.74	149.74	195.98	0.00	1596.58	0.094	0.10	2.487	A

Main results: (17:00-17:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	172.73	172.90	0.00	0.00	1279.30	0.135	0.16	3.256	A
1	WBOFF	142.04	142.14	172.90	0.00	1624.24	0.087	0.10	2.428	A
1	4080S	148.33	148.46	126.60	0.00	1370.04	0.108	0.12	2.946	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	123.16	123.26	113.18	0.00	1457.63	0.084	0.09	2.697	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	160.15	160.29	0.00	0.00	1302.53	0.123	0.14	3.153	A
2	EBOFF	122.26	122.35	160.29	0.00	1620.35	0.075	0.08	2.404	A

Main results: (17:15-17:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	144.64	144.75	0.00	0.00	1279.30	0.113	0.13	3.172	A
1	WBOFF	118.95	119.02	144.75	0.00	1642.44	0.072	0.08	2.364	A
1	4080S	124.22	124.31	106.01	0.00	1381.93	0.090	0.10	2.864	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	103.14	103.21	94.76	0.00	1468.90	0.070	0.08	2.635	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	134.10	134.20	0.00	0.00	1302.53	0.103	0.12	3.080	A
2	EBOFF	102.39	102.45	134.20	0.00	1637.73	0.063	0.07	2.344	A

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction 1 - Arm 4080N	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 2 - Arm 4080S	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, AM	2023 Base	AM		Varies by Arm	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	1	A55J5 WB	Roundabout	4080N,WBOFF,4080S,WBON			3.16	A
2	2	A55J5 EB	Roundabout	4080N,EBON,4080S,EBOFF			2.97	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description
1	4080N	4080N	(untitled)	
1	WBOFF	WBOFF	(untitled)	
1	4080S	4080S	(untitled)	
1	WBON	WBON	(untitled)	
2	4080N	4080N	(untitled)	
2	EBON	EBON	(untitled)	
2	4080S	4080S	(untitled)	
2	EBOFF	EBOFF	(untitled)	

Capacity Options

Junction	Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	4080N	0.00	99999.00
1	WBOFF	0.00	99999.00
1	4080S	0.00	99999.00
1	WBON	0.00	99999.00
2	4080N	0.00	99999.00
2	EBON	0.00	99999.00
2	4080S	0.00	99999.00
2	EBOFF	0.00	99999.00

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	4080N	2.70	6.40	9.00	14.70	37.00	30.00	
1	WBOFF	5.40	6.90	2.40	21.00	37.00	39.00	
1	4080S	3.70	6.10	10.50	21.00	37.00	49.00	
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	4080N	3.70	6.30	9.50	24.00	36.00	35.00	
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	4080S	3.60	4.60	8.60	20.00	36.00	32.00	
2	EBOFF	5.00	5.90	3.70	96.00	36.00	31.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	4080N		(calculated)	(calculated)	0.558	1279.301
1	WBOFF		(calculated)	(calculated)	0.647	1736.033
1	4080S		(calculated)	(calculated)	0.577	1443.084
1	WBON		(calculated)	(calculated)	Exit-only	Exit-only
2	4080N		(calculated)	(calculated)	0.612	1526.905
2	EBON		(calculated)	(calculated)	Exit-only	Exit-only
2	4080S		(calculated)	(calculated)	0.567	1302.528
2	EBOFF		(calculated)	(calculated)	0.666	1727.138

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	4080N	Linked Arm		N/A	
1	WBOFF	ONE HOUR	✓	71.00	100.000
1	4080S	ONE HOUR	✓	234.00	100.000
1	WBON	Exit-only	✓	Exit-only	Exit-only
2	4080N	ONE HOUR	✓	222.00	100.000
2	EBON	Exit-only	✓	Exit-only	Exit-only
2	4080S	Linked Arm		N/A	
2	EBOFF	ONE HOUR	✓	124.00	100.000

Linked Arm Data

Junction	Arm	From Junction ID	From Arm ID	Link Type	Flow Source	Uniform Flow (PCU/hr)	Flow Multiplier (%)	Internal Storage Space (PCU)
1	4080N	2	4080S	Simple (vertical queueing)	Normal	0.00	100.00	
2	4080S	1	4080N	Simple (vertical queueing)	Normal	0.00	100.00	

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		4080N	WBOFF	4080S	WBON
From	4080N	0.000	0.000	79.000	103.000
	WBOFF	30.000	0.000	41.000	0.000
	4080S	147.000	0.000	0.000	87.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		4080N	WBOFF	4080S	WBON
From	4080N	0.00	0.00	0.43	0.57
	WBOFF	0.42	0.00	0.58	0.00
	4080S	0.63	0.00	0.00	0.37
	WBON	0.25	0.25	0.25	0.25

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Counts / Proportions (PCU/hr) - Junction 2 (for whole period)

		To			
		4080N	EBON	4080S	EBOFF
From	4080N	0.000	86.000	136.000	0.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	4080S	84.000	92.000	0.000	0.000
	EBOFF	78.000	0.000	46.000	0.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 2 (for whole period)

		To			
		4080N	EBON	4080S	EBOFF
From	4080N	0.00	0.39	0.61	0.00
	EBON	0.25	0.25	0.25	0.25
	4080S	0.48	0.52	0.00	0.00
	EBOFF	0.63	0.00	0.37	0.00

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		4080N	WBOFF	4080S	WBON
From	4080N	1.000	1.000	1.000	1.000
	WBOFF	1.000	1.000	1.000	1.000
	4080S	1.000	1.000	1.000	1.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		4080N	WBOFF	4080S	WBON
From	4080N	0.0	0.0	0.0	0.0
	WBOFF	0.0	0.0	0.0	0.0
	4080S	0.0	0.0	0.0	0.0
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Average PCU Per Vehicle - Junction 2 (for whole period)

		To			
		4080N	EBON	4080S	EBOFF
From	4080N	1.000	1.000	1.000	1.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	4080S	1.000	1.000	1.000	1.000
	EBOFF	1.000	1.000	1.000	1.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 2 (for whole period)

		To			
		4080N	EBON	4080S	EBOFF
From	4080N	0.0	0.0	0.0	0.0
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	4080S	0.0	0.0	0.0	0.0
	EBOFF	0.0	0.0	0.0	0.0

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	4080N	0.16	3.34	0.19	A
1	WBOFF	0.05	2.35	0.05	A
1	4080S	0.19	3.27	0.23	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	0.17	3.03	0.21	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	0.15	3.25	0.18	A
2	EBOFF	0.09	2.46	0.09	A

Main Results for each time segment

Main results: (07:45-08:00)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	136.61	136.14	0.00	0.00	1279.30	0.107	0.12	3.147	A
1	WBOFF	53.45	53.32	136.14	0.00	1648.01	0.032	0.03	2.257	A
1	4080S	176.17	175.59	99.57	0.00	1385.64	0.127	0.15	2.973	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	167.13	166.62	103.74	0.00	1463.40	0.114	0.13	2.774	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	132.83	132.38	0.00	0.00	1302.53	0.102	0.11	3.077	A
2	EBOFF	93.35	93.11	132.38	0.00	1638.94	0.057	0.06	2.328	A

Main results: (08:00-08:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	163.52	163.41	0.00	0.00	1279.30	0.128	0.15	3.225	A
1	WBOFF	63.83	63.80	163.41	0.00	1630.37	0.039	0.04	2.297	A
1	4080S	210.36	210.22	119.44	0.00	1374.18	0.153	0.18	3.092	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	199.57	199.45	124.40	0.00	1450.76	0.138	0.16	2.876	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	159.02	158.92	0.00	0.00	1302.53	0.122	0.14	3.147	A
2	EBOFF	111.47	111.42	158.92	0.00	1621.27	0.069	0.07	2.384	A

Main results: (08:15-08:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	200.24	200.09	0.00	0.00	1279.30	0.157	0.18	3.335	A
1	WBOFF	78.17	78.13	200.09	0.00	1606.66	0.049	0.05	2.354	A
1	4080S	257.64	257.43	146.25	0.00	1358.71	0.190	0.23	3.268	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	244.43	244.24	152.33	0.00	1433.66	0.170	0.20	3.026	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	194.73	194.58	0.00	0.00	1302.53	0.150	0.18	3.248	A
2	EBOFF	136.53	136.45	194.58	0.00	1597.50	0.085	0.09	2.463	A

Main results: (08:30-08:45)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	200.38	200.38	0.00	0.00	1279.30	0.157	0.19	3.335	A
1	WBOFF	78.17	78.17	200.38	0.00	1606.47	0.049	0.05	2.355	A
1	4080S	257.64	257.64	146.43	0.00	1358.60	0.190	0.23	3.269	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	244.43	244.42	152.51	0.00	1433.55	0.171	0.21	3.026	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	194.88	194.88	0.00	0.00	1302.53	0.150	0.18	3.249	A
2	EBOFF	136.53	136.53	194.88	0.00	1597.31	0.085	0.09	2.463	A

Main results: (08:45-09:00)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	163.75	163.90	0.00	0.00	1279.30	0.128	0.15	3.227	A
1	WBOFF	63.83	63.87	163.90	0.00	1630.05	0.039	0.04	2.298	A
1	4080S	210.36	210.57	119.75	0.00	1374.00	0.153	0.18	3.094	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	199.57	199.75	124.71	0.00	1450.57	0.138	0.16	2.877	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	159.27	159.41	0.00	0.00	1302.53	0.122	0.14	3.148	A
2	EBOFF	111.47	111.55	159.41	0.00	1620.94	0.069	0.07	2.386	A

Main results: (09:00-09:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	137.11	137.22	0.00	0.00	1279.30	0.107	0.12	3.154	A
1	WBOFF	53.45	53.48	137.22	0.00	1647.31	0.032	0.03	2.258	A
1	4080S	176.17	176.31	100.26	0.00	1385.24	0.127	0.15	2.979	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	167.13	167.26	104.41	0.00	1462.99	0.114	0.13	2.778	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	133.36	133.46	0.00	0.00	1302.53	0.102	0.11	3.081	A
2	EBOFF	93.35	93.41	133.46	0.00	1638.23	0.057	0.06	2.331	A

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction 1 - Arm 4080N	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 2 - Arm 4080S	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, PM	2023 Base	PM		Varies by Arm	16:00	17:30	90	15		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	1	A55J5 WB	Roundabout	4080N,WBOFF,4080S,WBON			3.05	A
2	2	A55J5 EB	Roundabout	4080N,EBON,4080S,EBOFF			2.92	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description
1	4080N	4080N	(untitled)	
1	WBOFF	WBOFF	(untitled)	
1	4080S	4080S	(untitled)	
1	WBON	WBON	(untitled)	
2	4080N	4080N	(untitled)	
2	EBON	EBON	(untitled)	
2	4080S	4080S	(untitled)	
2	EBOFF	EBOFF	(untitled)	

Capacity Options

Junction	Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	4080N	0.00	99999.00
1	WBOFF	0.00	99999.00
1	4080S	0.00	99999.00
1	WBON	0.00	99999.00
2	4080N	0.00	99999.00
2	EBON	0.00	99999.00
2	4080S	0.00	99999.00
2	EBOFF	0.00	99999.00

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	4080N	2.70	6.40	9.00	14.70	37.00	30.00	
1	WBOFF	5.40	6.90	2.40	21.00	37.00	39.00	
1	4080S	3.70	6.10	10.50	21.00	37.00	49.00	
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	4080N	3.70	6.30	9.50	24.00	36.00	35.00	
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	4080S	3.60	4.60	8.60	20.00	36.00	32.00	
2	EBOFF	5.00	5.90	3.70	96.00	36.00	31.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	4080N		(calculated)	(calculated)	0.558	1279.301
1	WBOFF		(calculated)	(calculated)	0.647	1736.033
1	4080S		(calculated)	(calculated)	0.577	1443.084
1	WBON		(calculated)	(calculated)	Exit-only	Exit-only
2	4080N		(calculated)	(calculated)	0.612	1526.905
2	EBON		(calculated)	(calculated)	Exit-only	Exit-only
2	4080S		(calculated)	(calculated)	0.567	1302.528
2	EBOFF		(calculated)	(calculated)	0.666	1727.138

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	4080N	Linked Arm		N/A	
1	WBOFF	ONE HOUR	✓	166.00	100.000
1	4080S	ONE HOUR	✓	175.00	100.000
1	WBON	Exit-only	✓	Exit-only	Exit-only
2	4080N	ONE HOUR	✓	143.00	100.000
2	EBON	Exit-only	✓	Exit-only	Exit-only
2	4080S	Linked Arm		N/A	
2	EBOFF	ONE HOUR	✓	144.00	100.000

Linked Arm Data

Junction	Arm	From Junction ID	From Arm ID	Link Type	Flow Source	Uniform Flow (PCU/hr)	Flow Multiplier (%)	Internal Storage Space (PCU)
1	4080N	2	4080S	Simple (vertical queueing)	Normal	0.00	100.00	
2	4080S	1	4080N	Simple (vertical queueing)	Normal	0.00	100.00	

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		4080N	WBOFF	4080S	WBON
From	4080N	0.000	0.000	136.000	68.000
	WBOFF	85.000	0.000	81.000	0.000
	4080S	107.000	0.000	0.000	68.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		4080N	WBOFF	4080S	WBON
From	4080N	0.00	0.00	0.67	0.33
	WBOFF	0.51	0.00	0.49	0.00
	4080S	0.61	0.00	0.00	0.39
	WBON	0.25	0.25	0.25	0.25

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Counts / Proportions (PCU/hr) - Junction 2 (for whole period)

		To			
		4080N	EBON	4080S	EBOFF
From	4080N	0.000	32.000	111.000	0.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	4080S	154.000	44.000	0.000	0.000
	EBOFF	53.000	0.000	91.000	0.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 2 (for whole period)

		To			
		4080N	EBON	4080S	EBOFF
From	4080N	0.00	0.22	0.78	0.00
	EBON	0.25	0.25	0.25	0.25
	4080S	0.78	0.22	0.00	0.00
	EBOFF	0.37	0.00	0.63	0.00

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		4080N	WBOFF	4080S	WBON
From	4080N	1.000	1.000	1.000	1.000
	WBOFF	1.000	1.000	1.000	1.000
	4080S	1.000	1.000	1.000	1.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		4080N	WBOFF	4080S	WBON
From	4080N	0.0	0.0	0.0	0.0
	WBOFF	0.0	0.0	0.0	0.0
	4080S	0.0	0.0	0.0	0.0
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Average PCU Per Vehicle - Junction 2 (for whole period)

		To			
		4080N	EBON	4080S	EBOFF
From	4080N	1.000	1.000	1.000	1.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	4080S	1.000	1.000	1.000	1.000
	EBOFF	1.000	1.000	1.000	1.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 2 (for whole period)

		To			
		4080N	EBON	4080S	EBOFF
From	4080N	0.0	0.0	0.0	0.0
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	4080S	0.0	0.0	0.0	0.0
	EBOFF	0.0	0.0	0.0	0.0

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	4080N	0.17	3.40	0.21	A
1	WBOFF	0.11	2.55	0.13	A
1	4080S	0.14	3.12	0.17	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	0.11	2.81	0.12	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	0.16	3.30	0.19	A
2	EBOFF	0.10	2.52	0.11	A

Main Results for each time segment

Main results: (16:00-16:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	151.65	151.12	0.00	0.00	1279.30	0.119	0.13	3.189	A
1	WBOFF	124.97	124.64	151.12	0.00	1638.32	0.076	0.08	2.378	A
1	4080S	131.75	131.33	114.20	0.00	1377.20	0.096	0.11	2.889	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	107.66	107.34	100.25	0.00	1465.54	0.073	0.08	2.650	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	144.12	143.63	0.00	0.00	1302.53	0.111	0.12	3.104	A
2	EBOFF	108.41	108.13	143.63	0.00	1631.45	0.066	0.07	2.363	A

Main results: (16:15-16:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	181.50	181.38	0.00	0.00	1279.30	0.142	0.16	3.278	A
1	WBOFF	149.23	149.15	181.38	0.00	1618.76	0.092	0.10	2.449	A
1	4080S	157.32	157.22	136.83	0.00	1364.14	0.115	0.13	2.982	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	128.55	128.48	120.08	0.00	1453.40	0.088	0.10	2.716	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	172.51	172.39	0.00	0.00	1302.53	0.132	0.15	3.185	A
2	EBOFF	129.45	129.39	172.39	0.00	1612.29	0.080	0.09	2.427	A

Main results: (16:30-16:45)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	222.27	222.09	0.00	0.00	1279.30	0.174	0.21	3.404	A
1	WBOFF	182.77	182.66	222.09	0.00	1592.43	0.115	0.13	2.553	A
1	4080S	192.68	192.53	167.56	0.00	1346.41	0.143	0.17	3.119	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	157.45	157.34	147.04	0.00	1436.90	0.110	0.12	2.813	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	211.25	211.09	0.00	0.00	1302.53	0.162	0.19	3.298	A
2	EBOFF	158.55	158.45	211.09	0.00	1586.51	0.100	0.11	2.520	A

Main results: (16:45-17:00)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	222.41	222.40	0.00	0.00	1279.30	0.174	0.21	3.405	A
1	WBOFF	182.77	182.77	222.40	0.00	1592.23	0.115	0.13	2.553	A
1	4080S	192.68	192.68	167.72	0.00	1346.32	0.143	0.17	3.119	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	157.45	157.45	147.17	0.00	1436.82	0.110	0.12	2.813	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	211.39	211.39	0.00	0.00	1302.53	0.162	0.19	3.298	A
2	EBOFF	158.55	158.55	211.39	0.00	1586.31	0.100	0.11	2.520	A

Main results: (17:00-17:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	181.73	181.91	0.00	0.00	1279.30	0.142	0.17	3.282	A
1	WBOFF	149.23	149.34	181.91	0.00	1618.41	0.092	0.10	2.452	A
1	4080S	157.32	157.46	137.11	0.00	1363.98	0.115	0.13	2.983	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	128.55	128.66	120.29	0.00	1453.27	0.088	0.10	2.717	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	172.75	172.91	0.00	0.00	1302.53	0.133	0.15	3.186	A
2	EBOFF	129.45	129.55	172.91	0.00	1611.95	0.080	0.09	2.430	A

Main results: (17:15-17:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	152.17	152.30	0.00	0.00	1279.30	0.119	0.14	3.193	A
1	WBOFF	124.97	125.05	152.30	0.00	1637.56	0.076	0.08	2.381	A
1	4080S	131.75	131.85	114.80	0.00	1376.85	0.096	0.11	2.891	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	107.66	107.73	100.72	0.00	1465.25	0.073	0.08	2.651	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	144.65	144.76	0.00	0.00	1302.53	0.111	0.13	3.111	A
2	EBOFF	108.41	108.48	144.76	0.00	1630.70	0.066	0.07	2.366	A

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction 1 - Arm 4080N	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 2 - Arm 4080S	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, AM	2023 Base + Dev	AM		Varies by Arm	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	1	A55J5 WB	Roundabout	4080N,WBOFF,4080S,WBON			3.15	A
2	2	A55J5 EB	Roundabout	4080N,EBON,4080S,EBOFF			3.02	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description
1	4080N	4080N	(untitled)	
1	WBOFF	WBOFF	(untitled)	
1	4080S	4080S	(untitled)	
1	WBON	WBON	(untitled)	
2	4080N	4080N	(untitled)	
2	EBON	EBON	(untitled)	
2	4080S	4080S	(untitled)	
2	EBOFF	EBOFF	(untitled)	

Capacity Options

Junction	Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	4080N	0.00	99999.00
1	WBOFF	0.00	99999.00
1	4080S	0.00	99999.00
1	WBON	0.00	99999.00
2	4080N	0.00	99999.00
2	EBON	0.00	99999.00
2	4080S	0.00	99999.00
2	EBOFF	0.00	99999.00

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	4080N	2.70	6.40	9.00	14.70	37.00	30.00	
1	WBOFF	5.40	6.90	2.40	21.00	37.00	39.00	
1	4080S	3.70	6.10	10.50	21.00	37.00	49.00	
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	4080N	3.70	6.30	9.50	24.00	36.00	35.00	
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	4080S	3.60	4.60	8.60	20.00	36.00	32.00	
2	EBOFF	5.00	5.90	3.70	96.00	36.00	31.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	4080N		(calculated)	(calculated)	0.558	1279.301
1	WBOFF		(calculated)	(calculated)	0.647	1736.033
1	4080S		(calculated)	(calculated)	0.577	1443.084
1	WBON		(calculated)	(calculated)	Exit-only	Exit-only
2	4080N		(calculated)	(calculated)	0.612	1526.905
2	EBON		(calculated)	(calculated)	Exit-only	Exit-only
2	4080S		(calculated)	(calculated)	0.567	1302.528
2	EBOFF		(calculated)	(calculated)	0.666	1727.138

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	4080N	Linked Arm		N/A	
1	WBOFF	ONE HOUR	✓	86.00	100.000
1	4080S	ONE HOUR	✓	234.00	100.000
1	WBON	Exit-only	✓	Exit-only	Exit-only
2	4080N	ONE HOUR	✓	238.00	100.000
2	EBON	Exit-only	✓	Exit-only	Exit-only
2	4080S	Linked Arm		N/A	
2	EBOFF	ONE HOUR	✓	124.00	100.000

Linked Arm Data

Junction	Arm	From Junction ID	From Arm ID	Link Type	Flow Source	Uniform Flow (PCU/hr)	Flow Multiplier (%)	Internal Storage Space (PCU)
1	4080N	2	4080S	Simple (vertical queueing)	Normal	0.00	100.00	
2	4080S	1	4080N	Simple (vertical queueing)	Normal	0.00	100.00	

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		4080N	WBOFF	4080S	WBON
From	4080N	0.000	0.000	79.000	103.000
	WBOFF	45.000	0.000	41.000	0.000
	4080S	147.000	0.000	0.000	87.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		4080N	WBOFF	4080S	WBON
From	4080N	0.00	0.00	0.43	0.57
	WBOFF	0.52	0.00	0.48	0.00
	4080S	0.63	0.00	0.00	0.37
	WBON	0.25	0.25	0.25	0.25

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Counts / Proportions (PCU/hr) - Junction 2 (for whole period)

		To			
		4080N	EBON	4080S	EBOFF
From	4080N	0.000	102.000	136.000	0.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	4080S	100.000	92.000	0.000	0.000
	EBOFF	78.000	0.000	46.000	0.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 2 (for whole period)

		To			
		4080N	EBON	4080S	EBOFF
From	4080N	0.00	0.43	0.57	0.00
	EBON	0.25	0.25	0.25	0.25
	4080S	0.52	0.48	0.00	0.00
	EBOFF	0.63	0.00	0.37	0.00

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		4080N	WBOFF	4080S	WBON
From	4080N	1.000	1.000	1.000	1.000
	WBOFF	1.000	1.000	1.000	1.000
	4080S	1.000	1.000	1.000	1.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		4080N	WBOFF	4080S	WBON
From	4080N	0.0	0.0	0.0	0.0
	WBOFF	0.0	0.0	0.0	0.0
	4080S	0.0	0.0	0.0	0.0
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Average PCU Per Vehicle - Junction 2 (for whole period)

		To			
		4080N	EBON	4080S	EBOFF
From	4080N	1.000	1.000	1.000	1.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	4080S	1.000	1.000	1.000	1.000
	EBOFF	1.000	1.000	1.000	1.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 2 (for whole period)

		To			
		4080N	EBON	4080S	EBOFF
From	4080N	0.0	0.0	0.0	0.0
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	4080S	0.0	0.0	0.0	0.0
	EBOFF	0.0	0.0	0.0	0.0

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	4080N	0.16	3.34	0.19	A
1	WBOFF	0.06	2.38	0.06	A
1	4080S	0.19	3.30	0.24	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	0.18	3.07	0.22	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	0.16	3.30	0.19	A
2	EBOFF	0.09	2.48	0.09	A

Main Results for each time segment

Main results: (07:45-08:00)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	136.61	136.14	0.00	0.00	1279.30	0.107	0.12	3.147	A
1	WBOFF	64.75	64.58	136.14	0.00	1648.01	0.039	0.04	2.273	A
1	4080S	176.17	175.58	110.84	0.00	1379.14	0.128	0.15	2.989	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	179.18	178.62	103.35	0.00	1463.64	0.122	0.14	2.799	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	144.10	143.60	0.00	0.00	1302.53	0.111	0.12	3.104	A
2	EBOFF	93.35	93.11	143.60	0.00	1631.47	0.057	0.06	2.340	A

Main results: (08:00-08:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	163.52	163.41	0.00	0.00	1279.30	0.128	0.15	3.225	A
1	WBOFF	77.31	77.28	163.41	0.00	1630.37	0.047	0.05	2.317	A
1	4080S	210.36	210.22	132.92	0.00	1366.40	0.154	0.18	3.113	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	213.96	213.82	123.93	0.00	1451.04	0.147	0.17	2.909	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	172.50	172.38	0.00	0.00	1302.53	0.132	0.15	3.185	A
2	EBOFF	111.47	111.42	172.38	0.00	1612.29	0.069	0.07	2.398	A

Main results: (08:15-08:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	200.24	200.09	0.00	0.00	1279.30	0.157	0.18	3.335	A
1	WBOFF	94.69	94.64	200.09	0.00	1606.66	0.059	0.06	2.380	A
1	4080S	257.64	257.42	162.75	0.00	1349.18	0.191	0.23	3.297	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	262.04	261.84	151.76	0.00	1434.01	0.183	0.22	3.071	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	211.23	211.07	0.00	0.00	1302.53	0.162	0.19	3.298	A
2	EBOFF	136.53	136.45	211.07	0.00	1586.52	0.086	0.09	2.482	A

Main results: (08:30-08:45)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	200.38	200.38	0.00	0.00	1279.30	0.157	0.19	3.335	A
1	WBOFF	94.69	94.69	200.38	0.00	1606.47	0.059	0.06	2.380	A
1	4080S	257.64	257.64	162.95	0.00	1349.07	0.191	0.24	3.297	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	262.04	262.04	151.94	0.00	1433.90	0.183	0.22	3.071	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	211.39	211.39	0.00	0.00	1302.53	0.162	0.19	3.298	A
2	EBOFF	136.53	136.53	211.39	0.00	1586.31	0.086	0.09	2.482	A

Main results: (08:45-09:00)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	163.76	163.91	0.00	0.00	1279.30	0.128	0.15	3.229	A
1	WBOFF	77.31	77.36	163.91	0.00	1630.05	0.047	0.05	2.318	A
1	4080S	210.36	210.57	133.24	0.00	1366.21	0.154	0.18	3.115	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	213.96	214.16	124.24	0.00	1450.86	0.147	0.17	2.913	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	172.76	172.92	0.00	0.00	1302.53	0.133	0.15	3.186	A
2	EBOFF	111.47	111.55	172.92	0.00	1611.94	0.069	0.07	2.399	A

Main results: (09:00-09:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	137.12	137.22	0.00	0.00	1279.30	0.107	0.12	3.151	A
1	WBOFF	64.75	64.78	137.22	0.00	1647.30	0.039	0.04	2.274	A
1	4080S	176.17	176.31	111.56	0.00	1378.72	0.128	0.15	2.996	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	179.18	179.31	104.02	0.00	1463.23	0.122	0.14	2.803	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	144.66	144.77	0.00	0.00	1302.53	0.111	0.13	3.111	A
2	EBOFF	93.35	93.41	144.77	0.00	1630.69	0.057	0.06	2.341	A

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction 1 - Arm 4080N	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Linked Roundabout	Junction 2 - Arm 4080S	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, PM	2023 Base + Dev	PM		Varies by Arm	16:00	17:30	90	15		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	1	A55J5 WB	Roundabout	4080N,WBOFF,4080S,WBON			3.06	A
2	2	A55J5 EB	Roundabout	4080N,EBON,4080S,EBOFF			2.97	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description
1	4080N	4080N	(untitled)	
1	WBOFF	WBOFF	(untitled)	
1	4080S	4080S	(untitled)	
1	WBON	WBON	(untitled)	
2	4080N	4080N	(untitled)	
2	EBON	EBON	(untitled)	
2	4080S	4080S	(untitled)	
2	EBOFF	EBOFF	(untitled)	

Capacity Options

Junction	Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	4080N	0.00	99999.00
1	WBOFF	0.00	99999.00
1	4080S	0.00	99999.00
1	WBON	0.00	99999.00
2	4080N	0.00	99999.00
2	EBON	0.00	99999.00
2	4080S	0.00	99999.00
2	EBOFF	0.00	99999.00

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	4080N	2.70	6.40	9.00	14.70	37.00	30.00	
1	WBOFF	5.40	6.90	2.40	21.00	37.00	39.00	
1	4080S	3.70	6.10	10.50	21.00	37.00	49.00	
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	4080N	3.70	6.30	9.50	24.00	36.00	35.00	
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	4080S	3.60	4.60	8.60	20.00	36.00	32.00	
2	EBOFF	5.00	5.90	3.70	96.00	36.00	31.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	4080N		(calculated)	(calculated)	0.558	1279.301
1	WBOFF		(calculated)	(calculated)	0.647	1736.033
1	4080S		(calculated)	(calculated)	0.577	1443.084
1	WBON		(calculated)	(calculated)	Exit-only	Exit-only
2	4080N		(calculated)	(calculated)	0.612	1526.905
2	EBON		(calculated)	(calculated)	Exit-only	Exit-only
2	4080S		(calculated)	(calculated)	0.567	1302.528
2	EBOFF		(calculated)	(calculated)	0.666	1727.138

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	4080N	Linked Arm		N/A	
1	WBOFF	ONE HOUR	✓	182.00	100.000
1	4080S	ONE HOUR	✓	175.00	100.000
1	WBON	Exit-only	✓	Exit-only	Exit-only
2	4080N	ONE HOUR	✓	159.00	100.000
2	EBON	Exit-only	✓	Exit-only	Exit-only
2	4080S	Linked Arm		N/A	
2	EBOFF	ONE HOUR	✓	144.00	100.000

Linked Arm Data

Junction	Arm	From Junction ID	From Arm ID	Link Type	Flow Source	Uniform Flow (PCU/hr)	Flow Multiplier (%)	Internal Storage Space (PCU)
1	4080N	2	4080S	Simple (vertical queueing)	Normal	0.00	100.00	
2	4080S	1	4080N	Simple (vertical queueing)	Normal	0.00	100.00	

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		4080N	WBOFF	4080S	WBON
From	4080N	0.000	0.000	136.000	68.000
	WBOFF	101.000	0.000	81.000	0.000
	4080S	107.000	0.000	0.000	68.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		4080N	WBOFF	4080S	WBON
From	4080N	0.00	0.00	0.67	0.33
	WBOFF	0.55	0.00	0.45	0.00
	4080S	0.61	0.00	0.00	0.39
	WBON	0.25	0.25	0.25	0.25

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Counts / Proportions (PCU/hr) - Junction 2 (for whole period)

		To			
		4080N	EBON	4080S	EBOFF
From	4080N	0.000	48.000	111.000	0.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	4080S	170.000	44.000	0.000	0.000
	EBOFF	53.000	0.000	91.000	0.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 2 (for whole period)

		To			
		4080N	EBON	4080S	EBOFF
From	4080N	0.00	0.30	0.70	0.00
	EBON	0.25	0.25	0.25	0.25
	4080S	0.79	0.21	0.00	0.00
	EBOFF	0.37	0.00	0.63	0.00

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		4080N	WBOFF	4080S	WBON
From	4080N	1.000	1.000	1.000	1.000
	WBOFF	1.000	1.000	1.000	1.000
	4080S	1.000	1.000	1.000	1.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		4080N	WBOFF	4080S	WBON
From	4080N	0.0	0.0	0.0	0.0
	WBOFF	0.0	0.0	0.0	0.0
	4080S	0.0	0.0	0.0	0.0
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Average PCU Per Vehicle - Junction 2 (for whole period)

		To			
		4080N	EBON	4080S	EBOFF
From	4080N	1.000	1.000	1.000	1.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	4080S	1.000	1.000	1.000	1.000
	EBOFF	1.000	1.000	1.000	1.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 2 (for whole period)

		To			
		4080N	EBON	4080S	EBOFF
From	4080N	0.0	0.0	0.0	0.0
	EBON	Exit-only	Exit-only	Exit-only	Exit-only
	4080S	0.0	0.0	0.0	0.0
	EBOFF	0.0	0.0	0.0	0.0

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1	4080N	0.17	3.40	0.21	A
1	WBOFF	0.13	2.59	0.14	A
1	4080S	0.14	3.15	0.17	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	0.12	2.85	0.14	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	0.18	3.35	0.21	A
2	EBOFF	0.10	2.54	0.11	A

Main Results for each time segment

Main results: (16:00-16:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	151.65	151.11	0.00	0.00	1279.30	0.119	0.13	3.189	A
1	WBOFF	137.02	136.66	151.11	0.00	1638.32	0.084	0.09	2.397	A
1	4080S	131.75	131.33	126.21	0.00	1370.27	0.096	0.11	2.906	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	119.70	119.35	100.32	0.00	1465.50	0.082	0.09	2.674	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	156.13	155.59	0.00	0.00	1302.53	0.120	0.14	3.137	A
2	EBOFF	108.41	108.13	155.59	0.00	1623.48	0.067	0.07	2.375	A

Main results: (16:15-16:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	181.50	181.37	0.00	0.00	1279.30	0.142	0.16	3.278	A
1	WBOFF	163.61	163.53	181.37	0.00	1618.76	0.101	0.11	2.473	A
1	4080S	157.32	157.22	151.21	0.00	1355.85	0.116	0.13	3.003	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	142.94	142.86	120.16	0.00	1453.35	0.098	0.11	2.746	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	186.88	186.76	0.00	0.00	1302.53	0.143	0.17	3.226	A
2	EBOFF	129.45	129.39	186.76	0.00	1602.72	0.081	0.09	2.443	A

Main results: (16:30-16:45)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	222.26	222.08	0.00	0.00	1279.30	0.174	0.21	3.404	A
1	WBOFF	200.39	200.26	222.08	0.00	1592.43	0.126	0.14	2.585	A
1	4080S	192.68	192.53	185.16	0.00	1336.26	0.144	0.17	3.147	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	175.06	174.94	147.15	0.00	1436.83	0.122	0.14	2.852	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	228.85	228.67	0.00	0.00	1302.53	0.176	0.21	3.352	A
2	EBOFF	158.55	158.45	228.67	0.00	1574.80	0.101	0.11	2.541	A

Main results: (16:45-17:00)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	222.40	222.40	0.00	0.00	1279.30	0.174	0.21	3.405	A
1	WBOFF	200.39	200.38	222.40	0.00	1592.23	0.126	0.14	2.585	A
1	4080S	192.68	192.68	185.34	0.00	1336.16	0.144	0.17	3.147	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	175.06	175.06	147.28	0.00	1436.75	0.122	0.14	2.852	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	229.01	229.01	0.00	0.00	1302.53	0.176	0.21	3.352	A
2	EBOFF	158.55	158.55	229.01	0.00	1574.57	0.101	0.11	2.541	A

Main results: (17:00-17:15)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	181.73	181.91	0.00	0.00	1279.30	0.142	0.17	3.282	A
1	WBOFF	163.61	163.74	181.91	0.00	1618.41	0.101	0.11	2.476	A
1	4080S	157.32	157.47	151.50	0.00	1355.68	0.116	0.13	3.004	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	142.94	143.05	120.38	0.00	1453.22	0.098	0.11	2.747	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	187.15	187.32	0.00	0.00	1302.53	0.144	0.17	3.230	A
2	EBOFF	129.45	129.55	187.32	0.00	1602.34	0.081	0.09	2.444	A

Main results: (17:15-17:30)

Junction	Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
1	4080N	152.17	152.30	0.00	0.00	1279.30	0.119	0.14	3.193	A
1	WBOFF	137.02	137.10	152.30	0.00	1637.56	0.084	0.09	2.400	A
1	4080S	131.75	131.85	126.85	0.00	1369.90	0.096	0.11	2.909	A
1	WBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080N	119.70	119.78	100.80	0.00	1465.21	0.082	0.09	2.675	A
2	EBON	Exit-only	Exit-only	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	4080S	156.70	156.83	0.00	0.00	1302.53	0.120	0.14	3.141	A
2	EBOFF	108.41	108.48	156.83	0.00	1622.66	0.067	0.07	2.379	A

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: Llanrecheymedd_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\Llanerchymedd
Report generation date: 04/06/2018 11:42:29

» (Default Analysis Set) - 2017 Base, AM
» (Default Analysis Set) - 2017 Base, PM
» (Default Analysis Set) - 2023 Base, AM
» (Default Analysis Set) - 2023 Base, PM
» (Default Analysis Set) - 2023 Base + Dev, AM
» (Default Analysis Set) - 2023 Base + Dev, PM

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2017 Base			
Stream B-C	0.01	5.07	0.01	A
Stream B-A	0.05	6.89	0.05	A
Stream C-AB	0.01	5.76	0.01	A
Stream C-A	-	-	-	-
Stream A-B	-	-	-	-
Stream A-C	-	-	-	-

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:15 - 17:45
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 04/06/2018 11:42:24

File summary

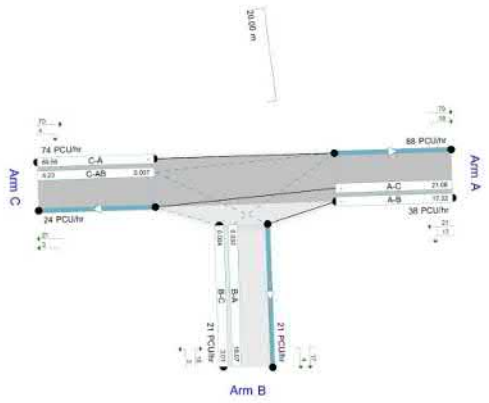
Title	(untitled)
Location	
Site Number	
Date	22/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, AM	2017 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Llanerchymedd-T-Juntion	T-Junction	Two-way	A,B,C	6.48	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	B5111 N		Major
B	B	Bachau Link		Minor
C	C	B5111 S		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.82		0.00		2.20	28.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				8.80	4.23	3.46	3.31	3.06	✓	1.00	40	88

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	577.653	0.101	0.256	0.161	0.366
1	B-C	734.106	0.109	0.274	-	-
1	C-B	590.178	0.221	0.221	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	51.00	100.000
B	ONE HOUR	✓	28.00	100.000
C	ONE HOUR	✓	98.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	**B**	**C**
From	**A**	0.000	23.000	28.000
	B	24.000	0.000	4.000
	C	93.000	5.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	**B**	**C**
From	**A**	0.00	0.45	0.55
	B	0.86	0.00	0.14
	C	0.95	0.05	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	**B**	**C**
From	**A**	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	5.07	0.01	A
B-A	0.05	6.89	0.05	A
C-AB	0.01	5.76	0.01	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	3.01	2.99	0.00	720.54	0.004	0.00	5.016	A
B-A	18.07	17.94	0.00	557.81	0.032	0.03	6.666	A
C-AB	4.23	4.20	0.00	629.03	0.007	0.01	5.761	A
C-A	69.55	69.55	0.00	-	-	-	-	-
A-B	17.32	17.32	0.00	-	-	-	-	-
A-C	21.08	21.08	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	3.60	3.59	0.00	717.82	0.005	0.01	5.039	A
B-A	21.58	21.55	0.00	553.95	0.039	0.04	6.761	A
C-AB	5.17	5.16	0.00	636.62	0.008	0.01	5.700	A
C-A	82.93	82.93	0.00	-	-	-	-	-
A-B	20.68	20.68	0.00	-	-	-	-	-
A-C	25.17	25.17	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	4.40	4.40	0.00	714.07	0.006	0.01	5.072	A
B-A	26.42	26.38	0.00	548.63	0.048	0.05	6.893	A
C-AB	6.52	6.51	0.00	647.11	0.010	0.01	5.619	A
C-A	101.38	101.38	0.00	-	-	-	-	-
A-B	25.32	25.32	0.00	-	-	-	-	-
A-C	30.83	30.83	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	4.40	4.40	0.00	714.06	0.006	0.01	5.072	A
B-A	26.42	26.42	0.00	548.63	0.048	0.05	6.893	A
C-AB	6.52	6.52	0.00	647.12	0.010	0.01	5.621	A
C-A	101.38	101.38	0.00	-	-	-	-	-
A-B	25.32	25.32	0.00	-	-	-	-	-
A-C	30.83	30.83	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	3.60	3.60	0.00	717.79	0.005	0.01	5.040	A
B-A	21.58	21.61	0.00	553.95	0.039	0.04	6.764	A
C-AB	5.17	5.18	0.00	636.62	0.008	0.01	5.702	A
C-A	82.93	82.93	0.00	-	-	-	-	-
A-B	20.68	20.68	0.00	-	-	-	-	-
A-C	25.17	25.17	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	3.01	3.01	0.00	720.49	0.004	0.00	5.017	A
B-A	18.07	18.10	0.00	557.80	0.032	0.03	6.669	A
C-AB	4.23	4.24	0.00	629.03	0.007	0.01	5.761	A
C-A	69.55	69.55	0.00	-	-	-	-	-
A-B	17.32	17.32	0.00	-	-	-	-	-
A-C	21.08	21.08	0.00	-	-	-	-	-

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, PM	2017 Base	PM		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Llanerchymedd-T-Juntion	T-Junction	Two-way	A,B,C	6.25	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Am	Name	Description	Arm Type
A	A	B5111 N		Major
B	B	Bachau Link		Minor
C	C	B5111 S		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.82		0.00		2.20	28.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				8.80	4.23	3.46	3.31	3.06	✓	1.00	40	88

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	577.653	0.101	0.256	0.161	0.366
1	B-C	734.106	0.109	0.274	-	-
1	C-B	590.178	0.221	0.221	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	148.00	100.000
B	ONE HOUR	✓	24.00	100.000
C	ONE HOUR	✓	270.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	15.000	133.000
	B	17.000	0.000	7.000
	C	258.000	12.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.10	0.90
	B	0.71	0.00	0.29
	C	0.96	0.04	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	5.31	0.01	A
B-A	0.04	7.67	0.04	A
C-AB	0.03	5.26	0.04	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	5.27	5.24	0.00	701.04	0.008	0.01	5.173	A
B-A	12.80	12.70	0.00	516.18	0.025	0.03	7.147	A
C-AB	12.34	12.26	0.00	697.43	0.018	0.02	5.254	A
C-A	190.93	190.93	0.00	-	-	-	-	-
A-B	11.29	11.29	0.00	-	-	-	-	-
A-C	100.13	100.13	0.00	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	6.29	6.29	0.00	694.49	0.009	0.01	5.230	A
B-A	15.28	15.26	0.00	504.22	0.030	0.03	7.361	A
C-AB	15.62	15.60	0.00	718.21	0.022	0.03	5.123	A
C-A	227.10	227.10	0.00	-	-	-	-	-
A-B	13.48	13.48	0.00	-	-	-	-	-
A-C	119.56	119.56	0.00	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	7.71	7.70	0.00	685.43	0.011	0.01	5.311	A
B-A	18.72	18.68	0.00	487.72	0.038	0.04	7.674	A
C-AB	20.65	20.61	0.00	746.72	0.028	0.04	4.957	A
C-A	276.63	276.63	0.00	-	-	-	-	-
A-B	16.52	16.52	0.00	-	-	-	-	-
A-C	146.44	146.44	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	7.71	7.71	0.00	685.42	0.011	0.01	5.311	A
B-A	18.72	18.72	0.00	487.71	0.038	0.04	7.675	A
C-AB	20.66	20.66	0.00	746.74	0.028	0.04	4.959	A
C-A	276.62	276.62	0.00	-	-	-	-	-
A-B	16.52	16.52	0.00	-	-	-	-	-
A-C	146.44	146.44	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	6.29	6.30	0.00	694.47	0.009	0.01	5.230	A
B-A	15.28	15.32	0.00	504.21	0.030	0.03	7.366	A
C-AB	15.63	15.67	0.00	718.23	0.022	0.03	5.124	A
C-A	227.09	227.09	0.00	-	-	-	-	-
A-B	13.48	13.48	0.00	-	-	-	-	-
A-C	119.56	119.56	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	5.27	5.28	0.00	700.99	0.008	0.01	5.176	A
B-A	12.80	12.82	0.00	516.15	0.025	0.03	7.151	A
C-AB	12.37	12.39	0.00	697.45	0.018	0.02	5.256	A
C-A	190.90	190.90	0.00	-	-	-	-	-
A-B	11.29	11.29	0.00	-	-	-	-	-
A-C	100.13	100.13	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, AM	2023 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Llanerchymedd-T-Juntion	T-Junction	Two-way	A,B,C	6.49	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	B5111 N		Major
B	B	Bachau Link		Minor
C	C	B5111 S		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.82		0.00		2.20	28.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				8.80	4.23	3.46	3.31	3.06	✓	1.00	40	88

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	577.653	0.101	0.256	0.161	0.366
1	B-C	734.106	0.109	0.274	-	-
1	C-B	590.178	0.221	0.221	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	53.00	100.000
B	ONE HOUR	✓	29.00	100.000
C	ONE HOUR	✓	104.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	24.000	29.000
	B	25.000	0.000	4.000
	C	98.000	6.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.45	0.55
	B	0.86	0.00	0.14
	C	0.94	0.06	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	5.08	0.01	A
B-A	0.05	6.93	0.05	A
C-AB	0.01	5.75	0.01	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	3.01	2.99	0.00	719.99	0.004	0.00	5.020	A
B-A	18.82	18.68	0.00	556.66	0.034	0.03	6.690	A
C-AB	5.11	5.07	0.00	631.25	0.008	0.01	5.748	A
C-A	73.19	73.19	0.00	-	-	-	-	-
A-B	18.07	18.07	0.00	-	-	-	-	-
A-C	21.83	21.83	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	3.60	3.59	0.00	717.16	0.005	0.01	5.044	A
B-A	22.47	22.45	0.00	552.58	0.041	0.04	6.790	A
C-AB	6.24	6.24	0.00	639.27	0.010	0.01	5.686	A
C-A	87.25	87.25	0.00	-	-	-	-	-
A-B	21.58	21.58	0.00	-	-	-	-	-
A-C	26.07	26.07	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	4.40	4.40	0.00	713.25	0.006	0.01	5.078	A
B-A	27.53	27.48	0.00	546.94	0.050	0.05	6.930	A
C-AB	7.90	7.88	0.00	650.36	0.012	0.01	5.602	A
C-A	106.61	106.61	0.00	-	-	-	-	-
A-B	26.42	26.42	0.00	-	-	-	-	-
A-C	31.93	31.93	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	4.40	4.40	0.00	713.24	0.006	0.01	5.078	A
B-A	27.53	27.52	0.00	546.94	0.050	0.05	6.930	A
C-AB	7.90	7.90	0.00	650.36	0.012	0.01	5.605	A
C-A	106.61	106.61	0.00	-	-	-	-	-
A-B	26.42	26.42	0.00	-	-	-	-	-
A-C	31.93	31.93	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	3.60	3.60	0.00	717.13	0.005	0.01	5.044	A
B-A	22.47	22.51	0.00	552.57	0.041	0.04	6.794	A
C-AB	6.25	6.26	0.00	639.27	0.010	0.01	5.688	A
C-A	87.25	87.25	0.00	-	-	-	-	-
A-B	21.58	21.58	0.00	-	-	-	-	-
A-C	26.07	26.07	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	3.01	3.01	0.00	719.94	0.004	0.00	5.022	A
B-A	18.82	18.85	0.00	556.65	0.034	0.04	6.696	A
C-AB	5.11	5.12	0.00	631.25	0.008	0.01	5.749	A
C-A	73.19	73.19	0.00	-	-	-	-	-
A-B	18.07	18.07	0.00	-	-	-	-	-
A-C	21.83	21.83	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, PM	2023 Base	PM		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Llanerchymedd-T-Juntion	T-Junction	Two-way	A,B,C	6.21	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	B5111 N		Major
B	B	Bachau Link		Minor
C	C	B5111 S		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.82		0.00		2.20	28.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				8.80	4.23	3.46	3.31	3.06	✓	1.00	40	88

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	577.653	0.101	0.256	0.161	0.366
1	B-C	734.106	0.109	0.274	-	-
1	C-B	590.178	0.221	0.221	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	135.00	100.000
B	ONE HOUR	✓	25.00	100.000
C	ONE HOUR	✓	285.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	16.000	119.000
	B	18.000	0.000	7.000
	C	272.000	13.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.12	0.88
	B	0.72	0.00	0.28
	C	0.95	0.05	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	5.28	0.01	A
B-A	0.04	7.68	0.04	A
C-AB	0.03	5.20	0.04	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	5.27	5.24	0.00	703.57	0.007	0.01	5.154	A
B-A	13.55	13.44	0.00	516.83	0.026	0.03	7.149	A
C-AB	13.56	13.47	0.00	706.34	0.019	0.02	5.195	A
C-A	201.00	201.00	0.00	-	-	-	-	-
A-B	12.05	12.05	0.00	-	-	-	-	-
A-C	89.59	89.59	0.00	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	6.29	6.29	0.00	697.51	0.009	0.01	5.207	A
B-A	16.18	16.16	0.00	505.00	0.032	0.03	7.363	A
C-AB	17.20	17.17	0.00	728.73	0.024	0.03	5.059	A
C-A	239.01	239.01	0.00	-	-	-	-	-
A-B	14.38	14.38	0.00	-	-	-	-	-
A-C	106.98	106.98	0.00	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	7.71	7.70	0.00	689.11	0.011	0.01	5.282	A
B-A	19.82	19.78	0.00	488.67	0.041	0.04	7.677	A
C-AB	22.79	22.75	0.00	759.37	0.030	0.04	4.886	A
C-A	291.00	291.00	0.00	-	-	-	-	-
A-B	17.62	17.62	0.00	-	-	-	-	-
A-C	131.02	131.02	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	7.71	7.71	0.00	689.10	0.011	0.01	5.282	A
B-A	19.82	19.82	0.00	488.66	0.041	0.04	7.677	A
C-AB	22.80	22.80	0.00	759.39	0.030	0.04	4.889	A
C-A	290.99	290.99	0.00	-	-	-	-	-
A-B	17.62	17.62	0.00	-	-	-	-	-
A-C	131.02	131.02	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	6.29	6.30	0.00	697.49	0.009	0.01	5.210	A
B-A	16.18	16.22	0.00	504.98	0.032	0.03	7.367	A
C-AB	17.22	17.25	0.00	728.75	0.024	0.03	5.061	A
C-A	238.99	238.99	0.00	-	-	-	-	-
A-B	14.38	14.38	0.00	-	-	-	-	-
A-C	106.98	106.98	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	5.27	5.28	0.00	703.53	0.007	0.01	5.155	A
B-A	13.55	13.58	0.00	516.80	0.026	0.03	7.156	A
C-AB	13.59	13.62	0.00	706.37	0.019	0.02	5.198	A
C-A	200.97	200.97	0.00	-	-	-	-	-
A-B	12.05	12.05	0.00	-	-	-	-	-
A-C	89.59	89.59	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, AM	2023 Base + Dev	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Llanerchymedd-T-Juntion	T-Junction	Two-way	A,B,C	7.24	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Am	Name	Description	Arm Type
A	A	B5111 N		Major
B	B	Bachau Link		Minor
C	C	B5111 S		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.82		0.00		2.20	28.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				8.80	4.23	3.46	3.31	3.06	✓	1.00	40	88

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	577.653	0.101	0.256	0.161	0.366
1	B-C	734.106	0.109	0.274	-	-
1	C-B	590.178	0.221	0.221	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	235.00	100.000
B	ONE HOUR	✓	29.00	100.000
C	ONE HOUR	✓	286.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	24.000	211.000
	B	25.000	0.000	4.000
	C	280.000	6.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.10	0.90
	B	0.86	0.00	0.14
	C	0.98	0.02	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	5.51	0.01	A
B-A	0.06	8.26	0.06	A
C-AB	0.01	5.22	0.02	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	3.01	2.99	0.00	682.05	0.004	0.00	5.301	A
B-A	18.82	18.67	0.00	499.42	0.038	0.04	7.486	A
C-AB	6.37	6.33	0.00	695.64	0.009	0.01	5.222	A
C-A	208.95	208.95	0.00	-	-	-	-	-
A-B	18.07	18.07	0.00	-	-	-	-	-
A-C	158.85	158.85	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	3.60	3.59	0.00	671.73	0.005	0.01	5.387	A
B-A	22.47	22.44	0.00	484.22	0.046	0.05	7.796	A
C-AB	8.12	8.11	0.00	716.34	0.011	0.01	5.082	A
C-A	248.99	248.99	0.00	-	-	-	-	-
A-B	21.58	21.58	0.00	-	-	-	-	-
A-C	189.68	189.68	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	4.40	4.40	0.00	657.40	0.007	0.01	5.512	A
B-A	27.53	27.47	0.00	463.22	0.059	0.06	8.260	A
C-AB	10.83	10.81	0.00	744.81	0.015	0.02	4.904	A
C-A	304.06	304.06	0.00	-	-	-	-	-
A-B	26.42	26.42	0.00	-	-	-	-	-
A-C	232.32	232.32	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	4.40	4.40	0.00	657.38	0.007	0.01	5.512	A
B-A	27.53	27.52	0.00	463.22	0.059	0.06	8.262	A
C-AB	10.84	10.84	0.00	744.82	0.015	0.02	4.906	A
C-A	304.06	304.06	0.00	-	-	-	-	-
A-B	26.42	26.42	0.00	-	-	-	-	-
A-C	232.32	232.32	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	3.60	3.60	0.00	671.70	0.005	0.01	5.387	A
B-A	22.47	22.53	0.00	484.21	0.046	0.05	7.799	A
C-AB	8.12	8.14	0.00	716.34	0.011	0.01	5.084	A
C-A	248.99	248.99	0.00	-	-	-	-	-
A-B	21.58	21.58	0.00	-	-	-	-	-
A-C	189.68	189.68	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	3.01	3.02	0.00	681.99	0.004	0.00	5.301	A
B-A	18.82	18.86	0.00	499.40	0.038	0.04	7.491	A
C-AB	6.38	6.39	0.00	695.66	0.009	0.01	5.224	A
C-A	208.93	208.93	0.00	-	-	-	-	-
A-B	18.07	18.07	0.00	-	-	-	-	-
A-C	158.85	158.85	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, PM	2023 Base + Dev	PM		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Llanerchymedd-T-Juntion	T-Junction	Two-way	A,B,C	6.56	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Am	Name	Description	Arm Type
A	A	B5111 N		Major
B	B	Bachau Link		Minor
C	C	B5111 S		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.82		0.00		2.20	28.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				8.80	4.23	3.46	3.31	3.06	✓	1.00	40	88

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	577.653	0.101	0.256	0.161	0.366
1	B-C	734.106	0.109	0.274	-	-
1	C-B	590.178	0.221	0.221	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	317.00	100.000
B	ONE HOUR	✓	25.00	100.000
C	ONE HOUR	✓	467.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	16.000	301.000
	B	18.000	0.000	7.000
	C	454.000	13.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.05	0.95
	B	0.72	0.00	0.28
	C	0.97	0.03	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	5.75	0.01	A
B-A	0.05	9.35	0.05	A
C-AB	0.04	4.78	0.05	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	5.27	5.24	0.00	665.69	0.008	0.01	5.450	A
B-A	13.55	13.43	0.00	459.59	0.029	0.03	8.067	A
C-AB	16.69	16.58	0.00	770.22	0.022	0.03	4.777	A
C-A	334.90	334.90	0.00	-	-	-	-	-
A-B	12.05	12.05	0.00	-	-	-	-	-
A-C	226.61	226.61	0.00	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	6.29	6.29	0.00	652.15	0.010	0.01	5.573	A
B-A	16.18	16.15	0.00	436.64	0.037	0.04	8.561	A
C-AB	21.92	21.89	0.00	804.33	0.027	0.03	4.600	A
C-A	397.90	397.90	0.00	-	-	-	-	-
A-B	14.38	14.38	0.00	-	-	-	-	-
A-C	270.59	270.59	0.00	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	7.71	7.70	0.00	633.32	0.012	0.01	5.753	A
B-A	19.82	19.77	0.00	404.95	0.049	0.05	9.345	A
C-AB	30.38	30.32	0.00	850.26	0.036	0.05	4.390	A
C-A	483.80	483.80	0.00	-	-	-	-	-
A-B	17.62	17.62	0.00	-	-	-	-	-
A-C	331.41	331.41	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	7.71	7.71	0.00	633.30	0.012	0.01	5.753	A
B-A	19.82	19.82	0.00	404.93	0.049	0.05	9.347	A
C-AB	30.40	30.40	0.00	850.28	0.036	0.05	4.391	A
C-A	483.78	483.78	0.00	-	-	-	-	-
A-B	17.62	17.62	0.00	-	-	-	-	-
A-C	331.41	331.41	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	6.29	6.30	0.00	652.12	0.010	0.01	5.576	A
B-A	16.18	16.23	0.00	436.62	0.037	0.04	8.565	A
C-AB	21.95	22.00	0.00	804.36	0.027	0.04	4.603	A
C-A	397.88	397.88	0.00	-	-	-	-	-
A-B	14.38	14.38	0.00	-	-	-	-	-
A-C	270.59	270.59	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	5.27	5.28	0.00	665.63	0.008	0.01	5.453	A
B-A	13.55	13.58	0.00	459.55	0.029	0.03	8.072	A
C-AB	16.74	16.77	0.00	770.27	0.022	0.03	4.779	A
C-A	334.84	334.84	0.00	-	-	-	-	-
A-B	12.05	12.05	0.00	-	-	-	-	-
A-C	226.61	226.61	0.00	-	-	-	-	-

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: B5110-B5111_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\B5110-B5111 Junction
Report generation date: 06/06/2018 08:41:14

» (Default Analysis Set) - 2017 Base, AM
» (Default Analysis Set) - 2017 Base, PM
» (Default Analysis Set) - 2023 Base, AM
» (Default Analysis Set) - 2023 Base, PM
» (Default Analysis Set) - 2023 Base + Dev, AM
» (Default Analysis Set) - 2023 Base + Dev, PM
» (Default Analysis Set) - Secondary 2023 Base + Dev, AM
» (Default Analysis Set) - Secondary 2023 Base + Dev, PM

Summary of junction performance

	AM				
	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2017 Base				
Stream B-AC	2.04	6.00	27.73	0.68	D
Stream C-AB	0.02	~1	5.42	0.02	A
Stream C-A	-	-	-	-	-
Stream A-B	-	-	-	-	-
Stream A-C	-	-	-	-	-

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:30 - 18:00
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:30 - 18:00
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:30 - 18:00
"D7 - Secondary 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D8 - Secondary 2023 Base + Dev, PM" model duration: 16:30 - 18:00

Run using Junctions 8.0.6.541 at 06/06/2018 08:41:07

File summary

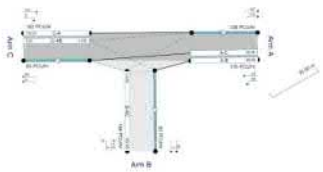
Title	(untitled)
Location	
Site Number	
Date	22/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base, AM	2017 Base	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	B5110 & B5111	T-Junction	Two-way	A,B,C		26.90	D

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	B5110 S		Major
B	B	B5111		Minor
C	C	B5110 N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.00		0.00		2.20	55.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	3.50								✓		18	114

Slope / Intercept / Capacity

Stream Intercept Adjustments

Stream	Use Adjustment	Reason	Direct Intercept Adjustment (PCU/hr)
B-AC	✓	Adverse Gradient	-80.00

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	566.127	0.103	0.261	0.164	0.372
1	B-C	730.529	0.112	0.283	-	-
1	C-B	605.814	0.235	0.235	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	234.00	100.000
B	ONE HOUR	✓	249.00	100.000
C	ONE HOUR	✓	215.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	**A**	176.17	176.17		
07:45-08:00	**B**	187.46	187.46		
07:45-08:00	**C**	161.86	161.86		
08:00-08:15	**A**	210.36	210.36		
08:00-08:15	**B**	223.85	223.85		
08:00-08:15	**C**	193.28	193.28		
08:15-08:30	**A**	257.64	257.64		
08:15-08:30	**B**	274.15	274.15		
08:15-08:30	**C**	236.72	236.72		
08:30-08:45	**A**	257.64	257.64		
08:30-08:45	**B**	274.15	274.15		
08:30-08:45	**C**	236.72	236.72		
08:45-09:00	**A**	210.36	210.36		
08:45-09:00	**B**	223.85	223.85		
08:45-09:00	**C**	193.28	193.28		
09:00-09:15	**A**	176.17	176.17		
09:00-09:15	**B**	187.46	187.46		
09:00-09:15	**C**	161.86	161.86		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	117.000	117.000
	B	242.000	0.000	7.000
	C	208.000	7.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.50	0.50
	B	0.97	0.00	0.03
	C	0.97	0.03	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.68	27.73	2.04	6.00	D	228.49	342.73	114.61	20.06	1.27	114.66	20.07
C-AB	0.02	5.42	0.02	−1	A	8.86	13.30	1.31	5.92	0.01	1.31	5.92
C-A	-	-	-	-	-	188.42	282.64	-	-	-	-	-
A-B	-	-	-	-	-	107.36	161.04	-	-	-	-	-
A-C	-	-	-	-	-	107.36	161.04	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	187.46	46.87	184.46	0.00	430.35	0.436	0.00	0.75	14.473	B
C-AB	6.81	1.70	6.77	0.00	671.21	0.010	0.00	0.01	5.417	A
C-A	155.05	38.76	155.05	0.00	-	-	-	-	-	-
A-B	88.08	22.02	88.08	0.00	-	-	-	-	-	-
A-C	88.08	22.02	88.08	0.00	-	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	223.85	55.96	222.43	0.00	418.80	0.534	0.75	1.10	18.192	C
C-AB	8.56	2.14	8.54	0.00	684.38	0.013	0.01	0.01	5.326	A
C-A	184.72	46.18	184.72	0.00	-	-	-	-	-	-
A-B	105.18	26.30	105.18	0.00	-	-	-	-	-	-
A-C	105.18	26.30	105.18	0.00	-	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	274.15	68.54	270.72	0.00	402.84	0.681	1.10	1.96	26.544	D
C-AB	11.21	2.80	11.20	0.00	702.72	0.016	0.01	0.02	5.205	A
C-A	225.51	56.38	225.51	0.00	-	-	-	-	-	-
A-B	128.82	32.20	128.82	0.00	-	-	-	-	-	-
A-C	128.82	32.20	128.82	0.00	-	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	274.15	68.54	273.85	0.00	402.84	0.681	1.96	2.04	27.731	D
C-AB	11.22	2.80	11.22	0.00	702.72	0.016	0.02	0.02	5.205	A
C-A	225.50	56.38	225.50	0.00	-	-	-	-	-	-
A-B	128.82	32.20	128.82	0.00	-	-	-	-	-	-
A-C	128.82	32.20	128.82	0.00	-	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	223.85	55.96	227.21	0.00	418.80	0.535	2.04	1.20	19.106	C
C-AB	8.56	2.14	8.58	0.00	684.39	0.013	0.02	0.01	5.326	A
C-A	184.72	46.18	184.72	0.00	-	-	-	-	-	-
A-B	105.18	26.30	105.18	0.00	-	-	-	-	-	-
A-C	105.18	26.30	105.18	0.00	-	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	187.46	46.87	189.07	0.00	430.34	0.436	1.20	0.79	15.022	C
C-AB	6.82	1.71	6.84	0.00	671.22	0.010	0.01	0.01	5.418	A
C-A	155.04	38.76	155.04	0.00	-	-	-	-	-	-
A-B	88.08	22.02	88.08	0.00	-	-	-	-	-	-
A-C	88.08	22.02	88.08	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	10.44	0.70	14.473	B	B
C-AB	0.17	0.01	5.417	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:00-08:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	15.59	1.04	18.192	C	B
C-AB	0.21	0.01	5.326	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:15-08:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	26.58	1.77	26.544	D	C
C-AB	0.28	0.02	5.205	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:30-08:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	30.11	2.01	27.731	D	C
C-AB	0.28	0.02	5.205	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:45-09:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	19.33	1.29	19.106	C	B
C-AB	0.21	0.01	5.326	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (09:00-09:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	12.57	0.84	15.022	C	B
C-AB	0.17	0.01	5.418	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.75	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	1.10	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	1.96	0.00	0.00	2.00	6.00			N/A	N/A
C-AB	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	2.04	0.00	0.00	0.00	5.00			N/A	N/A
C-AB	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	1.20	0.00	0.00	2.00	3.00			N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.79	0.00	0.00	1.00	2.00			N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base, PM	2017 Base	PM		ONE HOUR	16:30	18:00	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	B5110 & B5111	T-Junction	Two-way	A,B,C		13.91	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	B5110 S		Major
B	B	B5111		Minor
C	C	B5110 N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.00		0.00		2.20	55.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	3.50								✓		18	114

Slope / Intercept / Capacity

Stream Intercept Adjustments

Stream	Use Adjustment	Reason	Direct Intercept Adjustment (PCU/hr)
B-AC	✓	Adverse Gradient	-80.00

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	566.127	0.103	0.261	0.164	0.372
1	B-C	730.529	0.112	0.283	-	-
1	C-B	605.814	0.235	0.235	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	486.00	100.000
B	ONE HOUR	✓	112.00	100.000
C	ONE HOUR	✓	126.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:30-16:45	A	365.89	365.89		
16:30-16:45	B	84.32	84.32		
16:30-16:45	C	94.86	94.86		
16:45-17:00	A	436.90	436.90		
16:45-17:00	B	100.69	100.69		
16:45-17:00	C	113.27	113.27		
17:00-17:15	A	535.10	535.10		
17:00-17:15	B	123.31	123.31		
17:00-17:15	C	138.73	138.73		
17:15-17:30	A	535.10	535.10		
17:15-17:30	B	123.31	123.31		
17:15-17:30	C	138.73	138.73		
17:30-17:45	A	436.90	436.90		
17:30-17:45	B	100.69	100.69		
17:30-17:45	C	113.27	113.27		
17:45-18:00	A	365.89	365.89		
17:45-18:00	B	84.32	84.32		
17:45-18:00	C	94.86	94.86		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	258.000	228.000
	B	105.000	0.000	7.000
	C	122.000	4.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.53	0.47
	B	0.94	0.00	0.06
	C	0.97	0.03	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.33	14.25	0.48	1.00	B	102.77	154.16	31.92	12.42	0.35	31.93	12.43
C-AB	0.01	6.29	0.01	−1	A	4.56	6.84	0.76	6.69	0.01	0.76	6.69
C-A	-	-	-	-	-	111.06	166.58	-	-	-	-	-
A-B	-	-	-	-	-	236.75	355.12	-	-	-	-	-
A-C	-	-	-	-	-	209.22	313.83	-	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	84.32	21.08	83.31	0.00	413.36	0.204	0.00	0.25	10.876	B
C-AB	3.56	0.89	3.54	0.00	585.09	0.006	0.00	0.01	6.189	A
C-A	91.30	22.82	91.30	0.00	-	-	-	-	-	-
A-B	194.24	48.56	194.24	0.00	-	-	-	-	-	-
A-C	171.65	42.91	171.65	0.00	-	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	100.69	25.17	100.36	0.00	397.64	0.253	0.25	0.33	12.096	B
C-AB	4.42	1.10	4.41	0.00	582.00	0.008	0.01	0.01	6.232	A
C-A	108.85	27.21	108.85	0.00	-	-	-	-	-	-
A-B	231.94	57.98	231.94	0.00	-	-	-	-	-	-
A-C	204.97	51.24	204.97	0.00	-	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	123.31	30.83	122.74	0.00	375.91	0.328	0.33	0.48	14.187	B
C-AB	5.71	1.43	5.70	0.00	578.20	0.010	0.01	0.01	6.287	A
C-A	133.02	33.26	133.02	0.00	-	-	-	-	-	-
A-B	284.06	71.02	284.06	0.00	-	-	-	-	-	-
A-C	251.03	62.76	251.03	0.00	-	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	123.31	30.83	123.29	0.00	375.90	0.328	0.48	0.48	14.248	B
C-AB	5.71	1.43	5.71	0.00	578.20	0.010	0.01	0.01	6.287	A
C-A	133.02	33.26	133.02	0.00	-	-	-	-	-	-
A-B	284.06	71.02	284.06	0.00	-	-	-	-	-	-
A-C	251.03	62.76	251.03	0.00	-	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	100.69	25.17	101.24	0.00	397.63	0.253	0.48	0.34	12.170	B
C-AB	4.42	1.10	4.43	0.00	582.01	0.008	0.01	0.01	6.232	A
C-A	108.85	27.21	108.85	0.00	-	-	-	-	-	-
A-B	231.94	57.98	231.94	0.00	-	-	-	-	-	-
A-C	204.97	51.24	204.97	0.00	-	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	84.32	21.08	84.66	0.00	413.35	0.204	0.34	0.26	10.963	B
C-AB	3.57	0.89	3.57	0.00	585.09	0.006	0.01	0.01	6.190	A
C-A	91.29	22.82	91.29	0.00	-	-	-	-	-	-
A-B	194.24	48.56	194.24	0.00	-	-	-	-	-	-
A-C	171.65	42.91	171.65	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (16:30-16:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	3.60	0.24	10.876	B	B
C-AB	0.10	0.01	6.189	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (16:45-17:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	4.84	0.32	12.096	B	B
C-AB	0.12	0.01	6.232	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:00-17:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	6.86	0.46	14.187	B	B
C-AB	0.16	0.01	6.287	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:15-17:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	7.21	0.48	14.248	B	B
C-AB	0.16	0.01	6.287	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:30-17:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	5.38	0.36	12.170	B	B
C-AB	0.12	0.01	6.232	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:45-18:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	4.03	0.27	10.963	B	B
C-AB	0.10	0.01	6.190	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.25	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.33	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.48	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.48	0.00	0.00	0.00	1.00			N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.34	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:45-18:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.26	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base, AM	2023 Base	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	B5110 & B5111	T-Junction	Two-way	A,B,C		31.83	D

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	B5110 S		Major
B	B	B5111		Minor
C	C	B5110 N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.00		0.00		2.20	55.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	3.50								✓		18	114

Slope / Intercept / Capacity

Stream Intercept Adjustments

Stream	Use Adjustment	Reason	Direct Intercept Adjustment (PCU/hr)
B-AC	✓	Adverse Gradient	-80.00

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	566.127	0.103	0.261	0.164	0.372
1	B-C	730.529	0.112	0.283	-	-
1	C-B	605.814	0.235	0.235	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	248.00	100.000
B	ONE HOUR	✓	263.00	100.000
C	ONE HOUR	✓	228.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	186.71	186.71		
07:45-08:00	B	198.00	198.00		
07:45-08:00	C	171.65	171.65		
08:00-08:15	A	222.95	222.95		
08:00-08:15	B	236.43	236.43		
08:00-08:15	C	204.97	204.97		
08:15-08:30	A	273.05	273.05		
08:15-08:30	B	289.57	289.57		
08:15-08:30	C	251.03	251.03		
08:30-08:45	A	273.05	273.05		
08:30-08:45	B	289.57	289.57		
08:30-08:45	C	251.03	251.03		
08:45-09:00	A	222.95	222.95		
08:45-09:00	B	236.43	236.43		
08:45-09:00	C	204.97	204.97		
09:00-09:15	A	186.71	186.71		
09:00-09:15	B	198.00	198.00		
09:00-09:15	C	171.65	171.65		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	124.000	124.000
	B	256.000	0.000	7.000
	C	221.000	7.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.50	0.50
	B	0.97	0.00	0.03
	C	0.97	0.03	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.73	32.82	2.52	8.00	D	241.33	362.00	135.39	22.44	1.50	135.45	22.45
C-AB	0.02	5.39	0.02	−1	A	9.04	13.56	1.33	5.89	0.01	1.33	5.89
C-A	-	-	-	-	-	200.18	300.26	-	-	-	-	-
A-B	-	-	-	-	-	113.78	170.68	-	-	-	-	-
A-C	-	-	-	-	-	113.78	170.68	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	198.00	49.50	194.64	0.00	426.64	0.464	0.00	0.84	15.310	C
C-AB	6.92	1.73	6.88	0.00	675.54	0.010	0.00	0.01	5.383	A
C-A	164.73	41.18	164.73	0.00	-	-	-	-	-	-
A-B	93.35	23.34	93.35	0.00	-	-	-	-	-	-
A-C	93.35	23.34	93.35	0.00	-	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	236.43	59.11	234.72	0.00	414.40	0.571	0.84	1.27	19.832	C
C-AB	8.72	2.18	8.71	0.00	689.58	0.013	0.01	0.01	5.286	A
C-A	196.25	49.06	196.25	0.00	-	-	-	-	-	-
A-B	111.47	27.87	111.47	0.00	-	-	-	-	-	-
A-C	111.47	27.87	111.47	0.00	-	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	289.57	72.39	285.03	0.00	397.49	0.728	1.27	2.40	30.777	D
C-AB	11.47	2.87	11.45	0.00	709.13	0.016	0.01	0.02	5.159	A
C-A	239.56	59.89	239.56	0.00	-	-	-	-	-	-
A-B	136.53	34.13	136.53	0.00	-	-	-	-	-	-
A-C	136.53	34.13	136.53	0.00	-	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	289.57	72.39	289.08	0.00	397.49	0.728	2.40	2.52	32.818	D
C-AB	11.48	2.87	11.48	0.00	709.14	0.016	0.02	0.02	5.159	A
C-A	239.56	59.89	239.56	0.00	-	-	-	-	-	-
A-B	136.53	34.13	136.53	0.00	-	-	-	-	-	-
A-C	136.53	34.13	136.53	0.00	-	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	236.43	59.11	240.96	0.00	414.39	0.571	2.52	1.39	21.260	C
C-AB	8.72	2.18	8.74	0.00	689.59	0.013	0.02	0.01	5.289	A
C-A	196.24	49.06	196.24	0.00	-	-	-	-	-	-
A-B	111.47	27.87	111.47	0.00	-	-	-	-	-	-
A-C	111.47	27.87	111.47	0.00	-	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	198.00	49.50	200.00	0.00	426.62	0.464	1.39	0.89	16.024	C
C-AB	6.93	1.73	6.95	0.00	675.55	0.010	0.01	0.01	5.386	A
C-A	164.72	41.18	164.72	0.00	-	-	-	-	-	-
A-B	93.35	23.34	93.35	0.00	-	-	-	-	-	-
A-C	93.35	23.34	93.35	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	11.62	0.77	15.310	C	B
C-AB	0.17	0.01	5.383	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:00-08:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	17.78	1.19	19.832	C	B
C-AB	0.21	0.01	5.286	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:15-08:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	31.91	2.13	30.777	D	C
C-AB	0.28	0.02	5.159	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:30-08:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	37.12	2.47	32.818	D	C
C-AB	0.28	0.02	5.159	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:45-09:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	22.74	1.52	21.260	C	C
C-AB	0.22	0.01	5.289	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (09:00-09:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	14.22	0.95	16.024	C	B
C-AB	0.17	0.01	5.386	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.84	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	1.27	0.00	0.00	1.00	2.00			N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	2.40	0.00	0.00	3.00	8.00			N/A	N/A
C-AB	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	2.52	0.00	0.00	1.00	7.00			N/A	N/A
C-AB	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	1.39	0.00	0.00	2.00	4.00			N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.89	0.00	0.00	1.00	2.00			N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base, PM	2023 Base	PM		ONE HOUR	16:30	18:00	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	B5110 & B5111	T-Junction	Two-way	A,B,C		14.71	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Am	Name	Description	Arm Type
A	A	B5110 S		Major
B	B	B5111		Minor
C	C	B5110 N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.00		0.00		2.20	55.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	3.50								✓		18	114

Slope / Intercept / Capacity

Stream Intercept Adjustments

Stream	Use Adjustment	Reason	Direct Intercept Adjustment (PCU/hr)
B-AC	✓	Adverse Gradient	-80.00

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	566.127	0.103	0.261	0.164	0.372
1	B-C	730.529	0.112	0.283	-	-
1	C-B	605.814	0.235	0.235	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	514.00	100.000
B	ONE HOUR	✓	118.00	100.000
C	ONE HOUR	✓	133.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:30-16:45	A	386.97	386.97		
16:30-16:45	B	88.84	88.84		
16:30-16:45	C	100.13	100.13		
16:45-17:00	A	462.08	462.08		
16:45-17:00	B	106.08	106.08		
16:45-17:00	C	119.56	119.56		
17:00-17:15	A	565.92	565.92		
17:00-17:15	B	129.92	129.92		
17:00-17:15	C	146.44	146.44		
17:15-17:30	A	565.92	565.92		
17:15-17:30	B	129.92	129.92		
17:15-17:30	C	146.44	146.44		
17:30-17:45	A	462.08	462.08		
17:30-17:45	B	106.08	106.08		
17:30-17:45	C	119.56	119.56		
17:45-18:00	A	386.97	386.97		
17:45-18:00	B	88.84	88.84		
17:45-18:00	C	100.13	100.13		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	273.000	241.000
	B	111.000	0.000	7.000
	C	129.000	4.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.53	0.47
	B	0.94	0.00	0.06
	C	0.97	0.03	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.35	15.06	0.54	1.00	C	108.28	162.42	35.10	12.97	0.39	35.11	12.97
C-AB	0.01	6.30	0.01	−1	A	4.63	6.94	0.78	6.71	0.01	0.78	6.71
C-A	-	-	-	-	-	117.41	176.12	-	-	-	-	-
A-B	-	-	-	-	-	250.51	375.76	-	-	-	-	-
A-C	-	-	-	-	-	221.15	331.72	-	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	88.84	22.21	87.74	0.00	408.35	0.218	0.00	0.27	11.191	B
C-AB	3.60	0.90	3.57	0.00	584.13	0.006	0.00	0.01	6.200	A
C-A	96.53	24.13	96.53	0.00	-	-	-	-	-	-
A-B	205.53	51.38	205.53	0.00	-	-	-	-	-	-
A-C	181.44	45.36	181.44	0.00	-	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	106.08	26.52	105.72	0.00	391.75	0.271	0.27	0.36	12.569	B
C-AB	4.48	1.12	4.47	0.00	580.96	0.008	0.01	0.01	6.244	A
C-A	115.09	28.77	115.09	0.00	-	-	-	-	-	-
A-B	245.42	61.36	245.42	0.00	-	-	-	-	-	-
A-C	216.65	54.16	216.65	0.00	-	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	129.92	32.48	129.26	0.00	368.78	0.352	0.36	0.53	14.985	B
C-AB	5.81	1.45	5.79	0.00	577.09	0.010	0.01	0.01	6.300	A
C-A	140.63	35.16	140.63	0.00	-	-	-	-	-	-
A-B	300.58	75.14	300.58	0.00	-	-	-	-	-	-
A-C	265.35	66.34	265.35	0.00	-	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	129.92	32.48	129.90	0.00	368.78	0.352	0.53	0.54	15.065	C
C-AB	5.81	1.45	5.81	0.00	577.10	0.010	0.01	0.01	6.300	A
C-A	140.63	35.16	140.63	0.00	-	-	-	-	-	-
A-B	300.58	75.14	300.58	0.00	-	-	-	-	-	-
A-C	265.35	66.34	265.35	0.00	-	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	106.08	26.52	106.72	0.00	391.74	0.271	0.54	0.38	12.660	B
C-AB	4.48	1.12	4.49	0.00	580.96	0.008	0.01	0.01	6.246	A
C-A	115.09	28.77	115.09	0.00	-	-	-	-	-	-
A-B	245.42	61.36	245.42	0.00	-	-	-	-	-	-
A-C	216.65	54.16	216.65	0.00	-	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	88.84	22.21	89.22	0.00	408.34	0.218	0.38	0.28	11.296	B
C-AB	3.61	0.90	3.61	0.00	584.13	0.006	0.01	0.01	6.200	A
C-A	96.52	24.13	96.52	0.00	-	-	-	-	-	-
A-B	205.53	51.38	205.53	0.00	-	-	-	-	-	-
A-C	181.44	45.36	181.44	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (16:30-16:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	3.90	0.26	11.191	B	B
C-AB	0.10	0.01	6.200	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (16:45-17:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	5.28	0.35	12.569	B	B
C-AB	0.12	0.01	6.244	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:00-17:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	7.61	0.51	14.985	B	B
C-AB	0.17	0.01	6.300	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:15-17:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	8.02	0.53	15.065	C	B
C-AB	0.17	0.01	6.300	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:30-17:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	5.91	0.39	12.660	B	B
C-AB	0.13	0.01	6.246	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:45-18:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	4.38	0.29	11.296	B	B
C-AB	0.10	0.01	6.200	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.27	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.36	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.53	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.54	0.00	0.00	0.00	1.00			N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.38	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:45-18:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.28	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base + Dev, AM	2023 Base + Dev	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	B5110 & B5111	T-Junction	Two-way	A,B,C		449.02	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	B5110 S		Major
B	B	B5111		Minor
C	C	B5110 N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.00		0.00		2.20	55.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	3.50								✓		18	114

Slope / Intercept / Capacity

Stream Intercept Adjustments

Stream	Use Adjustment	Reason	Direct Intercept Adjustment (PCU/hr)
B-AC	✓	Adverse Gradient	-80.00

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	566.127	0.103	0.261	0.164	0.372
1	B-C	730.529	0.112	0.283	-	-
1	C-B	605.814	0.235	0.235	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	407.00	100.000
B	ONE HOUR	✓	421.00	100.000
C	ONE HOUR	✓	228.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowinPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	306.41	306.41		
07:45-08:00	B	316.95	316.95		
07:45-08:00	C	171.65	171.65		
08:00-08:15	A	365.88	365.88		
08:00-08:15	B	378.47	378.47		
08:00-08:15	C	204.97	204.97		
08:15-08:30	A	448.12	448.12		
08:15-08:30	B	463.53	463.53		
08:15-08:30	C	251.03	251.03		
08:30-08:45	A	448.12	448.12		
08:30-08:45	B	463.53	463.53		
08:30-08:45	C	251.03	251.03		
08:45-09:00	A	365.88	365.88		
08:45-09:00	B	378.47	378.47		
08:45-09:00	C	204.97	204.97		
09:00-09:15	A	306.41	306.41		
09:00-09:15	B	316.95	316.95		
09:00-09:15	C	171.65	171.65		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

From	To: A	To: B	To: C
A	0.000	283.000	124.000
B	414.000	0.000	7.000
C	221.000	7.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

From	To: A	To: B	To: C
A	0.00	0.70	0.30
B	0.98	0.00	0.02
C	0.97	0.03	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

From	To: A	To: B	To: C
A	1.000	1.000	1.000
B	1.000	1.000	1.000
C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

From	To: A	To: B	To: C
A	0.0	0.0	0.0
B	0.0	0.0	0.0
C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	1.23	459.62	51.78	90.00	F	386.32	579.48	2342.62	242.56	26.03	2394.95	247.98
C-AB	0.02	5.60	0.02	−1	A	9.23	13.85	1.43	6.22	0.02	1.43	6.22
C-A	-	-	-	-	-	199.98	299.98	-	-	-	-	-
A-B	-	-	-	-	-	259.69	389.53	-	-	-	-	-
A-C	-	-	-	-	-	113.78	170.68	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	316.95	79.24	305.56	0.00	412.87	0.768	0.00	2.85	30.949	D
C-AB	7.01	1.75	6.96	0.00	650.01	0.011	0.00	0.01	5.598	A
C-A	164.64	41.16	164.64	0.00	-	-	-	-	-	-
A-B	213.06	53.26	213.06	0.00	-	-	-	-	-	-
A-C	93.35	23.34	93.35	0.00	-	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	378.47	94.62	359.55	0.00	398.22	0.950	2.85	7.58	70.321	F
C-AB	8.88	2.22	8.87	0.00	659.69	0.013	0.01	0.02	5.530	A
C-A	196.09	49.02	196.09	0.00	-	-	-	-	-	-
A-B	254.41	63.60	254.41	0.00	-	-	-	-	-	-
A-C	111.47	27.87	111.47	0.00	-	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	463.53	115.88	373.29	0.00	377.97	1.226	7.58	30.14	204.524	F
C-AB	11.79	2.95	11.77	0.00	673.51	0.018	0.02	0.02	5.439	A
C-A	239.24	59.81	239.24	0.00	-	-	-	-	-	-
A-B	311.59	77.90	311.59	0.00	-	-	-	-	-	-
A-C	136.53	34.13	136.53	0.00	-	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	463.53	115.88	376.94	0.00	377.96	1.226	30.14	51.78	402.939	F
C-AB	11.80	2.95	11.80	0.00	673.52	0.018	0.02	0.02	5.442	A
C-A	239.23	59.81	239.23	0.00	-	-	-	-	-	-
A-B	311.59	77.90	311.59	0.00	-	-	-	-	-	-
A-C	136.53	34.13	136.53	0.00	-	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	378.47	94.62	390.66	0.00	398.21	0.950	51.78	48.74	459.620	F
C-AB	8.89	2.22	8.91	0.00	659.71	0.013	0.02	0.02	5.531	A
C-A	196.08	49.02	196.08	0.00	-	-	-	-	-	-
A-B	254.41	63.60	254.41	0.00	-	-	-	-	-	-
A-C	111.47	27.87	111.47	0.00	-	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	316.95	79.24	404.55	0.00	412.85	0.768	48.74	26.84	340.672	F
C-AB	7.02	1.76	7.04	0.00	650.03	0.011	0.02	0.01	5.598	A
C-A	164.63	41.16	164.63	0.00	-	-	-	-	-	-
A-B	213.06	53.26	213.06	0.00	-	-	-	-	-	-
A-C	93.35	23.34	93.35	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	35.31	2.35	30.945	D	D
C-AB	0.18	0.01	5.598	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:00-08:15)

Stream	Queueing Total Delay (PCU-	Queueing Rate Of Delay (PCU-	Average Delay Per Arriving	Unsignalised Level Of	Signalised Level Of
B-AC	86.08	5.74	70.321	F	E
C-AB	0.23	0.02	5.530	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:15-08:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	285.85	19.06	204.524	F	F
C-AB	0.31	0.02	5.439	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:30-08:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	614.71	40.98	402.939	F	F
C-AB	0.31	0.02	5.442	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:45-09:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	753.89	50.26	459.620	F	F
C-AB	0.23	0.02	5.531	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (09:00-09:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	566.78	37.79	340.672	F	F
C-AB	0.18	0.01	5.598	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	2.85	0.00	0.00	6.00	9.00			N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	7.58	0.00	4.00	17.00	23.00			N/A	N/A
C-AB	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	30.14	10.00	27.00	48.00	56.00			N/A	N/A
C-AB	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	51.78	23.00	48.00	77.00	87.00			N/A	N/A
C-AB	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	48.74	17.00	44.00	78.00	90.00			N/A	N/A
C-AB	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	26.84	3.00	21.00	53.00	65.00			N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base + Dev, PM	2023 Base + Dev	PM		ONE HOUR	16:30	18:00	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	B5110 & B5111	T-Junction	Two-way	A,B,C		69.74	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	B5110 S		Major
B	B	B5111		Minor
C	C	B5110 N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.00		0.00		2.20	55.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	3.50								✓		18	114

Slope / Intercept / Capacity

Stream Intercept Adjustments

Stream	Use Adjustment	Reason	Direct Intercept Adjustment (PCU/hr)
B-AC	✓	Adverse Gradient	-80.00

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	566.127	0.103	0.261	0.164	0.372
1	B-C	730.529	0.112	0.283	-	-
1	C-B	605.814	0.235	0.235	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	672.00	100.000
B	ONE HOUR	✓	276.00	100.000
C	ONE HOUR	✓	133.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:30-16:45	A	505.92	505.92		
16:30-16:45	B	207.79	207.79		
16:30-16:45	C	100.13	100.13		
16:45-17:00	A	604.11	604.11		
16:45-17:00	B	248.12	248.12		
16:45-17:00	C	119.56	119.56		
17:00-17:15	A	739.89	739.89		
17:00-17:15	B	303.88	303.88		
17:00-17:15	C	146.44	146.44		
17:15-17:30	A	739.89	739.89		
17:15-17:30	B	303.88	303.88		
17:15-17:30	C	146.44	146.44		
17:30-17:45	A	604.11	604.11		
17:30-17:45	B	248.12	248.12		
17:30-17:45	C	119.56	119.56		
17:45-18:00	A	505.92	505.92		
17:45-18:00	B	207.79	207.79		
17:45-18:00	C	100.13	100.13		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	431.000	241.000
	B	269.000	0.000	7.000
	C	129.000	4.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.64	0.36
	B	0.97	0.00	0.03
	C	0.97	0.03	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.88	70.91	5.53	21.00	F	253.26	379.89	233.67	36.91	2.60	233.77	36.92
C-AB	0.01	6.75	0.01	−1	A	4.71	7.06	0.84	7.16	0.01	0.84	7.16
C-A	-	-	-	-	-	117.34	176.00	-	-	-	-	-
A-B	-	-	-	-	-	395.49	593.24	-	-	-	-	-
A-C	-	-	-	-	-	221.15	331.72	-	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	207.79	51.95	203.46	0.00	391.59	0.531	0.00	1.08	18.740	C
C-AB	3.63	0.91	3.61	0.00	557.71	0.007	0.00	0.01	6.496	A
C-A	96.50	24.12	96.50	0.00	-	-	-	-	-	-
A-B	324.48	81.12	324.48	0.00	-	-	-	-	-	-
A-C	181.44	45.36	181.44	0.00	-	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	248.12	62.03	245.09	0.00	372.59	0.666	1.08	1.84	27.558	D
C-AB	4.54	1.14	4.53	0.00	549.76	0.008	0.01	0.01	6.602	A
C-A	115.02	28.76	115.02	0.00	-	-	-	-	-	-
A-B	387.46	96.87	387.46	0.00	-	-	-	-	-	-
A-C	216.65	54.16	216.65	0.00	-	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	303.88	75.97	292.12	0.00	346.32	0.877	1.84	4.78	56.766	F
C-AB	5.94	1.49	5.93	0.00	539.46	0.011	0.01	0.01	6.746	A
C-A	140.49	35.12	140.49	0.00	-	-	-	-	-	-
A-B	474.54	118.63	474.54	0.00	-	-	-	-	-	-
A-C	265.35	66.34	265.35	0.00	-	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	303.88	75.97	300.86	0.00	346.32	0.877	4.78	5.53	70.906	F
C-AB	5.94	1.49	5.94	0.00	539.47	0.011	0.01	0.01	6.749	A
C-A	140.49	35.12	140.49	0.00	-	-	-	-	-	-
A-B	474.54	118.63	474.54	0.00	-	-	-	-	-	-
A-C	265.35	66.34	265.35	0.00	-	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	248.12	62.03	261.55	0.00	372.58	0.666	5.53	2.17	35.451	E
C-AB	4.54	1.14	4.56	0.00	549.76	0.008	0.01	0.01	6.605	A
C-A	115.02	28.76	115.02	0.00	-	-	-	-	-	-
A-B	387.46	96.87	387.46	0.00	-	-	-	-	-	-
A-C	216.65	54.16	216.65	0.00	-	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	207.79	51.95	211.77	0.00	391.57	0.531	2.17	1.18	20.435	C
C-AB	3.64	0.91	3.65	0.00	557.71	0.007	0.01	0.01	6.499	A
C-A	96.49	24.12	96.49	0.00	-	-	-	-	-	-
A-B	324.48	81.12	324.48	0.00	-	-	-	-	-	-
A-C	181.44	45.36	181.44	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (16:30-16:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	14.70	0.98	18.740	C	B
C-AB	0.10	0.01	6.496	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (16:45-17:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	25.00	1.67	27.558	D	C
C-AB	0.13	0.01	6.602	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:00-17:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	57.01	3.80	56.766	F	E
C-AB	0.18	0.01	6.746	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:15-17:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	78.10	5.21	70.906	F	E
C-AB	0.18	0.01	6.749	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:30-17:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	39.67	2.64	35.451	E	D
C-AB	0.14	0.01	6.605	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:45-18:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	19.19	1.28	20.435	C	C
C-AB	0.10	0.01	6.499	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	1.08	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	1.84	0.00	0.00	3.00	4.00			N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	4.78	0.00	0.00	12.00	17.00			N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	5.53	0.00	0.00	12.00	21.00			N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	2.17	0.00	0.00	4.00	7.00			N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:45-18:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	1.18	0.00	0.00	1.00	3.00			N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - Secondary 2023 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relat
Secondary 2023 Base + Dev, AM	Secondary 2023 Base + Dev	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	B5110 & B5111	T-Junction	Two-way	A,B,C		96.72	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	B5110 S		Major
B	B	B5111		Minor
C	C	B5110 N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.00		0.00		2.20	55.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	3.50								✓		18	114

Slope / Intercept / Capacity

Stream Intercept Adjustments

Stream	Use Adjustment	Reason	Direct Intercept Adjustment (PCU/hr)
B-AC	✓	Adverse Gradient	-80.00

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	566.127	0.103	0.261	0.164	0.372
1	B-C	730.529	0.112	0.283	-	-
1	C-B	605.814	0.235	0.235	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	321.00	100.000
B	ONE HOUR	✓	336.00	100.000
C	ONE HOUR	✓	228.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	241.67	241.67		
07:45-08:00	B	252.96	252.96		
07:45-08:00	C	171.65	171.65		
08:00-08:15	A	288.57	288.57		
08:00-08:15	B	302.06	302.06		
08:00-08:15	C	204.97	204.97		
08:15-08:30	A	353.43	353.43		
08:15-08:30	B	369.94	369.94		
08:15-08:30	C	251.03	251.03		
08:30-08:45	A	353.43	353.43		
08:30-08:45	B	369.94	369.94		
08:30-08:45	C	251.03	251.03		
08:45-09:00	A	288.57	288.57		
08:45-09:00	B	302.06	302.06		
08:45-09:00	C	204.97	204.97		
09:00-09:15	A	241.67	241.67		
09:00-09:15	B	252.96	252.96		
09:00-09:15	C	171.65	171.65		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

From	To: A	To: B	To: C
A	0.000	197.000	124.000
B	329.000	0.000	7.000
C	221.000	7.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

From	To: A	To: B	To: C
A	0.00	0.61	0.39
B	0.98	0.00	0.02
C	0.97	0.03	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

From	To: A	To: B	To: C
A	1.000	1.000	1.000
B	1.000	1.000	1.000
C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

From	To: A	To: B	To: C
A	0.0	0.0	0.0
B	0.0	0.0	0.0
C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.95	99.43	9.61	36.00	F	308.32	462.48	364.15	47.24	4.05	364.34	47.27
C-AB	0.02	5.48	0.02	−1	A	9.13	13.69	1.38	6.03	0.02	1.38	6.03
C-A	-	-	-	-	-	200.09	300.14	-	-	-	-	-
A-B	-	-	-	-	-	180.77	271.16	-	-	-	-	-
A-C	-	-	-	-	-	113.78	170.68	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	252.96	63.24	247.24	0.00	420.15	0.602	0.00	1.43	20.217	C
C-AB	6.96	1.74	6.91	0.00	663.82	0.010	0.00	0.01	5.480	A
C-A	164.69	41.17	164.69	0.00	-	-	-	-	-	-
A-B	148.31	37.08	148.31	0.00	-	-	-	-	-	-
A-C	93.35	23.34	93.35	0.00	-	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	302.06	75.51	297.52	0.00	406.80	0.743	1.43	2.56	31.613	D
C-AB	8.79	2.20	8.78	0.00	675.86	0.013	0.01	0.01	5.396	A
C-A	196.18	49.04	196.18	0.00	-	-	-	-	-	-
A-B	177.10	44.27	177.10	0.00	-	-	-	-	-	-
A-C	111.47	27.87	111.47	0.00	-	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	369.94	92.49	350.05	0.00	388.35	0.953	2.56	7.54	70.707	F
C-AB	11.61	2.90	11.59	0.00	692.78	0.017	0.01	0.02	5.284	A
C-A	239.42	59.85	239.42	0.00	-	-	-	-	-	-
A-B	216.90	54.23	216.90	0.00	-	-	-	-	-	-
A-C	136.53	34.13	136.53	0.00	-	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	369.94	92.49	361.65	0.00	388.35	0.953	7.54	9.61	99.426	F
C-AB	11.62	2.90	11.62	0.00	692.78	0.017	0.02	0.02	5.284	A
C-A	239.41	59.85	239.41	0.00	-	-	-	-	-	-
A-B	216.90	54.23	216.90	0.00	-	-	-	-	-	-
A-C	136.53	34.13	136.53	0.00	-	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	302.06	75.51	327.27	0.00	406.79	0.743	9.61	3.31	53.081	F
C-AB	8.80	2.20	8.82	0.00	675.87	0.013	0.02	0.01	5.396	A
C-A	196.17	49.04	196.17	0.00	-	-	-	-	-	-
A-B	177.10	44.27	177.10	0.00	-	-	-	-	-	-
A-C	111.47	27.87	111.47	0.00	-	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	252.96	63.24	259.80	0.00	420.13	0.602	3.31	1.60	23.305	C
C-AB	6.97	1.74	6.99	0.00	663.83	0.011	0.01	0.01	5.480	A
C-A	164.68	41.17	164.68	0.00	-	-	-	-	-	-
A-B	148.31	37.08	148.31	0.00	-	-	-	-	-	-
A-C	93.35	23.34	93.35	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	19.15	1.28	20.217	C	C
C-AB	0.17	0.01	5.480	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:00-08:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	34.12	2.27	31.613	D	C
C-AB	0.22	0.01	5.396	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:15-08:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	84.36	5.62	70.707	F	E
C-AB	0.29	0.02	5.284	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:30-08:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	129.97	8.66	99.426	F	F
C-AB	0.29	0.02	5.284	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (08:45-09:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	69.94	4.66	53.081	F	D
C-AB	0.22	0.01	5.396	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (09:00-09:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	26.63	1.78	23.305	C	C
C-AB	0.18	0.01	5.480	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	1.43	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	2.56	0.00	1.00	5.00	7.00			N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	7.54	0.00	3.00	18.00	25.00			N/A	N/A
C-AB	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	9.61	0.00	2.00	25.00	36.00			N/A	N/A
C-AB	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	3.31	0.00	0.00	7.00	12.00			N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	1.60	0.00	0.00	1.00	5.00			N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - Secondary 2023 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relat
Secondary 2023 Base + Dev, PM	Secondary 2023 Base + Dev	PM		ONE HOUR	16:30	18:00	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	B5110 & B5111	T-Junction	Two-way	A,B,C		23.90	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	B5110 S		Major
B	B	B5111		Minor
C	C	B5110 N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.00		0.00		2.20	55.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	3.50								✓		18	114

Slope / Intercept / Capacity

Stream Intercept Adjustments

Stream	Use Adjustment	Reason	Direct Intercept Adjustment (PCU/hr)
B-AC	✓	Adverse Gradient	-80.00

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	566.127	0.103	0.261	0.164	0.372
1	B-C	730.529	0.112	0.283	-	-
1	C-B	605.814	0.235	0.235	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	587.00	100.000
B	ONE HOUR	✓	191.00	100.000
C	ONE HOUR	✓	133.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:30-16:45	A	441.92	441.92		
16:30-16:45	B	143.79	143.79		
16:30-16:45	C	100.13	100.13		
16:45-17:00	A	527.70	527.70		
16:45-17:00	B	171.71	171.71		
16:45-17:00	C	119.56	119.56		
17:00-17:15	A	646.30	646.30		
17:00-17:15	B	210.29	210.29		
17:00-17:15	C	146.44	146.44		
17:15-17:30	A	646.30	646.30		
17:15-17:30	B	210.29	210.29		
17:15-17:30	C	146.44	146.44		
17:30-17:45	A	527.70	527.70		
17:30-17:45	B	171.71	171.71		
17:30-17:45	C	119.56	119.56		
17:45-18:00	A	441.92	441.92		
17:45-18:00	B	143.79	143.79		
17:45-18:00	C	100.13	100.13		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	346.000	241.000
	B	184.000	0.000	7.000
	C	129.000	4.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.59	0.41
	B	0.96	0.00	0.04
	C	0.97	0.03	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-AC	0.59	24.37	1.39	3.00	C	175.26	262.90	80.67	18.41	0.90	80.69	18.42
C-AB	0.01	6.50	0.01	−1	A	4.66	7.00	0.81	6.91	0.01	0.81	6.91
C-A	-	-	-	-	-	117.38	176.07	-	-	-	-	-
A-B	-	-	-	-	-	317.50	476.24	-	-	-	-	-
A-C	-	-	-	-	-	221.15	331.72	-	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	143.79	35.95	141.60	0.00	399.67	0.360	0.00	0.55	13.837	B
C-AB	3.62	0.90	3.59	0.00	571.92	0.006	0.00	0.01	6.333	A
C-A	96.51	24.13	96.51	0.00	-	-	-	-	-	-
A-B	260.49	65.12	260.49	0.00	-	-	-	-	-	-
A-C	181.44	45.36	181.44	0.00	-	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	171.71	42.93	170.73	0.00	381.96	0.450	0.55	0.79	16.961	C
C-AB	4.50	1.13	4.50	0.00	566.54	0.008	0.01	0.01	6.404	A
C-A	115.06	28.76	115.06	0.00	-	-	-	-	-	-
A-B	311.05	77.76	311.05	0.00	-	-	-	-	-	-
A-C	216.65	54.16	216.65	0.00	-	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	210.29	52.57	208.07	0.00	357.46	0.588	0.79	1.35	23.732	C
C-AB	5.87	1.47	5.85	0.00	559.71	0.010	0.01	0.01	6.499	A
C-A	140.57	35.14	140.57	0.00	-	-	-	-	-	-
A-B	380.95	95.24	380.95	0.00	-	-	-	-	-	-
A-C	265.35	66.34	265.35	0.00	-	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	210.29	52.57	210.14	0.00	357.46	0.588	1.35	1.39	24.368	C
C-AB	5.87	1.47	5.87	0.00	559.71	0.010	0.01	0.01	6.501	A
C-A	140.57	35.14	140.57	0.00	-	-	-	-	-	-
A-B	380.95	95.24	380.95	0.00	-	-	-	-	-	-
A-C	265.35	66.34	265.35	0.00	-	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	171.71	42.93	173.87	0.00	381.95	0.450	1.39	0.84	17.475	C
C-AB	4.51	1.13	4.52	0.00	566.55	0.008	0.01	0.01	6.404	A
C-A	115.06	28.76	115.06	0.00	-	-	-	-	-	-
A-B	311.05	77.76	311.05	0.00	-	-	-	-	-	-
A-C	216.65	54.16	216.65	0.00	-	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-AC	143.79	35.95	144.87	0.00	399.66	0.360	0.84	0.58	14.190	B
C-AB	3.62	0.91	3.63	0.00	571.92	0.006	0.01	0.01	6.334	A
C-A	96.51	24.13	96.51	0.00	-	-	-	-	-	-
A-B	260.49	65.12	260.49	0.00	-	-	-	-	-	-
A-C	181.44	45.36	181.44	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (16:30-16:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	7.70	0.51	13.837	B	B
C-AB	0.10	0.01	6.333	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (16:45-17:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	11.26	0.75	16.961	C	B
C-AB	0.13	0.01	6.404	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:00-17:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	18.60	1.24	23.732	C	C
C-AB	0.17	0.01	6.499	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:15-17:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	20.56	1.37	24.368	C	C
C-AB	0.17	0.01	6.501	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:30-17:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	13.50	0.90	17.475	C	B
C-AB	0.13	0.01	6.404	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queueing Delay results: (17:45-18:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-AC	9.05	0.60	14.190	B	B
C-AB	0.10	0.01	6.334	A	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.55	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.79	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	1.35	0.00	0.00	0.00	3.00			N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	1.39	0.00	0.00	0.00	3.00			N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.84	0.00	0.00	1.00	1.00			N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:45-18:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.58	0.00	0.00	0.00	1.00			N/A	N/A
C-AB	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: FFORDD_CAE_SEL_B5110_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\Ffordd Cae Sel B5110
Report generation date: 06/06/2018 09:12:32

» (Default Analysis Set) - 2017 Base, AM
» (Default Analysis Set) - 2017 Base, PM
» (Default Analysis Set) - 2023 Base, AM
» (Default Analysis Set) - 2023 Base, PM
» (Default Analysis Set) - 2023 Base + Dev, AM
» (Default Analysis Set) - 2023 Base + Dev, PM

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2017 Base			
Arm 3	0.41	8.88	0.29	A
Arm 1	1.62	10.69	0.62	B
Arm 2	4.31	31.61	0.83	D

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:15 - 17:45
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 06/06/2018 09:12:27

File summary

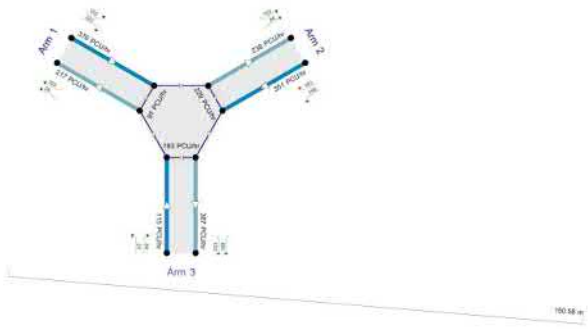
Title	(untitled)
Location	
Site Number	
Date	27/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	RogersA2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base, AM	2017 Base	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	Asda Link/ B5110	Mini-roundabout	3,1,2	19.18	C

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
3	3	Ffordd Cae Sel	
1	1	B5110 S	
2	2	B5110 N	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
3	0.00	99999.00		0.00
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
3	3.56	3.56	5.74	2.40	14.81	11.23	0.00	
1	3.40	3.40	3.40	0.00	20.00	20.00	0.00	
2	3.54	3.54	3.70	5.11	13.89	10.52	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
3		(calculated)	(calculated)	0.567	736.311
1		(calculated)	(calculated)	1.101	1334.631
2		(calculated)	(calculated)	0.543	754.840

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
3	None			
1	Percentage			75.00
2	Percentage			110.00

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
3	ONE HOUR	✓	154.00	100.000
1	ONE HOUR	✓	503.00	100.000
2	ONE HOUR	✓	471.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		3	1	2
From	3	9.000	32.000	113.000
	1	298.000	0.000	205.000
	2	212.000	259.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		3	1	2
From	3	0.06	0.21	0.73
	1	0.59	0.00	0.41
	2	0.45	0.55	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		3	1	2
From	3	1.000	1.000	1.000
	1	1.000	1.000	1.000
	2	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		3	1	2
From	3	0.0	0.0	0.0
	1	0.0	0.0	0.0
	2	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
3	0.29	8.88	0.41	−1	A	141.31	211.97	27.92	7.90	0.31	27.92	7.90
1	0.62	10.69	1.62	2.00	B	461.56	692.34	97.33	8.43	1.08	97.35	8.44
2	0.83	31.61	4.31	15.00	D	432.20	648.30	199.57	18.47	2.22	199.62	18.47

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	115.94	28.98	115.04	387.22	192.74	0.00	627.01	553.93	0.185	0.00	0.22	7.021	A
1	378.68	94.67	375.95	216.64	91.14	0.00	925.72	638.61	0.409	0.00	0.68	6.515	A
2	354.59	88.65	350.50	237.63	229.45	0.00	693.19	584.86	0.512	0.00	1.02	10.386	B

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	138.44	34.61	138.17	464.70	231.40	0.00	605.09	553.93	0.229	0.22	0.29	7.705	A
1	452.19	113.05	451.04	260.11	109.46	0.00	910.59	638.61	0.497	0.68	0.97	7.812	A
2	423.42	105.85	420.81	285.21	275.29	0.00	665.80	584.86	0.636	1.02	1.68	14.537	B

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	169.56	42.39	169.09	565.73	280.05	0.00	577.50	553.93	0.294	0.29	0.41	8.805	A
1	553.81	138.45	551.30	315.19	133.95	0.00	890.36	638.61	0.622	0.97	1.60	10.537	B
2	518.58	129.65	509.28	348.76	336.50	0.00	629.22	584.86	0.824	1.68	4.00	28.032	D

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	169.56	42.39	169.54	570.82	284.49	0.00	574.98	553.93	0.295	0.41	0.41	8.879	A
1	553.81	138.45	553.72	319.71	134.31	0.00	890.07	638.61	0.622	1.60	1.62	10.695	B
2	518.58	129.65	517.35	350.07	337.96	0.00	628.35	584.86	0.825	4.00	4.31	31.608	D

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	138.44	34.61	138.89	472.52	238.28	0.00	601.18	553.93	0.230	0.41	0.30	7.794	A
1	452.19	113.05	454.66	267.14	110.03	0.00	910.11	638.61	0.497	1.62	1.00	7.946	A
2	423.42	105.85	433.32	287.21	277.48	0.00	664.49	584.86	0.637	4.31	1.83	16.181	C

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	115.94	28.98	116.23	392.83	196.65	0.00	624.79	553.93	0.186	0.30	0.23	7.082	A
1	378.68	94.67	379.89	220.81	92.08	0.00	924.94	638.61	0.409	1.00	0.70	6.618	A
2	354.59	88.65	357.62	240.11	231.86	0.00	691.76	584.86	0.513	1.83	1.08	10.870	B

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	3.25	0.22	7.021	A	A
1	9.84	0.66	6.515	A	A
2	14.38	0.96	10.386	B	B

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	4.30	0.29	7.705	A	A
1	14.05	0.94	7.812	A	A
2	23.50	1.57	14.537	B	B

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	5.97	0.40	8.805	A	A
1	22.67	1.51	10.537	B	B
2	51.26	3.42	28.032	D	C

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	6.20	0.41	8.879	A	A
1	24.19	1.61	10.695	B	B
2	62.75	4.18	31.608	D	C

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	4.67	0.31	7.794	A	A
1	15.72	1.05	7.946	A	A
2	30.62	2.04	16.181	C	B

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	3.53	0.24	7.082	A	A
1	10.86	0.72	6.618	A	A
2	17.05	1.14	10.870	B	B

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	0.22	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
1	0.68	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
2	1.02	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:00-08:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	0.29	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
1	0.97	0.00	0.00	1.00	1.00			N/A	N/A
2	1.68	0.00	0.00	3.00	4.00			N/A	N/A

Queue Variation results: (08:15-08:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	0.41	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
1	1.60	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
2	4.00	0.00	0.00	8.00	15.00			N/A	N/A

Queue Variation results: (08:30-08:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	0.41	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
1	1.62	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
2	4.31	0.00	0.00	4.00	14.00			N/A	N/A

Queue Variation results: (08:45-09:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	0.30	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
1	1.00	0.00	0.00	1.00	2.00			N/A	N/A
2	1.83	0.00	0.00	3.00	6.00			N/A	N/A

Queue Variation results: (09:00-09:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	0.23	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
1	0.70	0.00	0.00	1.00	1.00			N/A	N/A
2	1.08	0.00	0.00	1.00	3.00			N/A	N/A

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base, PM	2017 Base	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	Asda Link/ B5110	Mini-roundabout	3,1,2	19.52	C

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Am	Name	Description
3	3	Ffordd Cae Sel	
1	1	B5110 S	
2	2	B5110 N	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
3	0.00	99999.00		0.00
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
3	3.56	3.56	5.74	2.40	14.81	11.23	0.00	
1	3.40	3.40	3.40	0.00	20.00	20.00	0.00	
2	3.54	3.54	3.70	5.11	13.89	10.52	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
3		(calculated)	(calculated)	0.567	736.311
1		(calculated)	(calculated)	1.101	1334.631
2		(calculated)	(calculated)	0.543	754.840

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
3	None			
1	Percentage			75.00
2	Percentage			110.00

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
3	ONE HOUR	✓	356.00	100.000
1	ONE HOUR	✓	553.00	100.000
2	ONE HOUR	✓	303.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		3	1	2
From	3	11.000	71.000	274.000
	1	292.000	0.000	261.000
	2	128.000	175.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		3	1	2
From	3	0.03	0.20	0.77
	1	0.53	0.00	0.47
	2	0.42	0.58	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		3	1	2
From	3	1.000	1.000	1.000
	1	1.000	1.000	1.000
	2	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		3	1	2
From	3	0.0	0.0	0.0
	1	0.0	0.0	0.0
	2	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
3	0.63	15.28	1.63	3.00	C	326.67	490.01	96.54	11.82	1.07	96.56	11.82
1	0.82	26.32	4.24	14.00	D	507.44	761.16	196.24	15.47	2.18	196.28	15.47
2	0.53	12.08	1.10	?	B	278.04	417.06	67.33	9.69	0.75	67.34	9.69

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	268.02	67.00	265.34	321.47	130.64	0.00	662.23	534.52	0.405	0.00	0.67	9.012	A
1	416.33	104.08	412.34	183.55	212.42	0.00	825.57	647.62	0.504	0.00	1.00	8.631	A
2	228.11	57.03	226.19	398.83	225.92	0.00	695.30	616.08	0.328	0.00	0.48	7.643	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	320.04	80.01	318.89	385.74	156.87	0.00	647.35	534.52	0.494	0.67	0.96	10.920	B
1	497.14	124.28	494.57	220.47	255.29	0.00	790.17	647.62	0.629	1.00	1.64	12.071	B
2	272.39	68.10	271.61	478.86	271.00	0.00	668.36	616.08	0.408	0.48	0.68	9.055	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	391.96	97.99	389.40	468.87	191.74	0.00	627.58	534.52	0.625	0.96	1.60	14.950	B
1	608.86	152.22	599.58	269.40	311.74	0.00	743.55	647.62	0.819	1.64	3.96	23.597	C
2	333.61	83.40	331.99	582.69	328.63	0.00	633.92	616.08	0.526	0.68	1.08	11.857	B

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	391.96	97.99	391.83	473.92	192.63	0.00	627.07	534.52	0.625	1.60	1.63	15.278	C
1	608.86	152.22	607.77	270.77	313.68	0.00	741.95	647.62	0.821	3.96	4.24	26.320	D
2	333.61	83.40	333.52	588.42	333.03	0.00	631.29	616.08	0.528	1.08	1.10	12.080	B

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	320.04	80.01	322.55	393.41	158.24	0.00	646.58	534.52	0.495	1.63	1.00	11.196	B
1	497.14	124.28	506.99	222.57	258.22	0.00	787.75	647.62	0.631	4.24	1.77	13.239	B
2	272.39	68.10	273.98	487.54	277.67	0.00	664.38	616.08	0.410	1.10	0.71	9.258	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	268.02	67.00	269.26	326.41	132.23	0.00	661.32	534.52	0.405	1.00	0.69	9.212	A
1	416.33	104.08	419.24	185.93	215.56	0.00	822.98	647.62	0.506	1.77	1.04	8.981	A
2	228.11	57.03	228.95	405.11	229.69	0.00	693.05	616.08	0.329	0.71	0.50	7.770	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	9.52	0.63	9.012	A	A
1	14.15	0.94	8.631	A	A
2	6.93	0.46	7.643	A	A

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	13.74	0.92	10.920	B	B
1	23.15	1.54	12.071	B	B
2	9.81	0.65	9.055	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	22.36	1.49	14.950	B	B
1	51.35	3.42	23.597	C	C
2	15.41	1.03	11.857	B	B

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	24.26	1.62	15.278	C	B
1	61.88	4.13	26.320	D	C
2	16.43	1.10	12.080	B	B

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	15.86	1.06	11.196	B	B
1	29.28	1.95	13.239	B	B
2	11.05	0.74	9.258	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	10.80	0.72	9.212	A	A
1	16.43	1.10	8.981	A	A
2	7.69	0.51	7.770	A	A

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	0.67	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
1	1.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
2	0.48	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	0.96	0.00	0.00	1.00	1.00			N/A	N/A
1	1.64	0.00	0.00	3.00	4.00			N/A	N/A
2	0.68	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	1.60	0.00	0.00	0.00	3.00			N/A	N/A
1	3.96	0.00	0.00	7.00	14.00			N/A	N/A
2	1.08	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	1.63	0.00	0.00	0.00	2.00			N/A	N/A
1	4.24	0.00	0.00	3.00	13.00			N/A	N/A
2	1.10	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	1.00	0.00	0.00	1.00	2.00			N/A	N/A
1	1.77	0.00	0.00	3.00	6.00			N/A	N/A
2	0.71	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:30-17:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	0.69	0.00	0.00	1.00	1.00			N/A	N/A
1	1.04	0.00	0.00	1.00	3.00			N/A	N/A
2	0.50	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base, AM	2023 Base	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	Asda Link/ B5110	Mini-roundabout	3,1,2	36.09	E

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
3	3	Ffordd Cae Sel	
1	1	B5110 S	
2	2	B5110 N	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
3	0.00	99999.00		0.00
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
3	3.56	3.56	5.74	2.40	14.81	11.23	0.00	
1	3.40	3.40	3.40	0.00	20.00	20.00	0.00	
2	3.54	3.54	3.70	5.11	13.89	10.52	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
3		(calculated)	(calculated)	0.567	736.311
1		(calculated)	(calculated)	1.101	1334.631
2		(calculated)	(calculated)	0.543	754.840

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
3	None			
1	Percentage			75.00
2	Percentage			110.00

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
3	ONE HOUR	✓	164.00	100.000
1	ONE HOUR	✓	533.00	100.000
2	ONE HOUR	✓	529.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		3	1	2
From	3	10.000	34.000	120.000
	1	316.000	0.000	217.000
	2	255.000	274.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		3	1	2
From	3	0.06	0.21	0.73
	1	0.59	0.00	0.41
	2	0.48	0.52	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		3	1	2
From	3	1.000	1.000	1.000
	1	1.000	1.000	1.000
	2	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		3	1	2
From	3	0.0	0.0	0.0
	1	0.0	0.0	0.0
	2	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
3	0.32	9.30	0.46	1.00	A	150.49	225.73	30.90	8.21	0.34	30.90	8.21
1	0.66	12.14	1.94	3.00	B	489.09	733.64	112.90	9.23	1.25	112.92	9.23
2	0.95	68.52	10.42	41.00	F	485.42	728.13	372.32	30.68	4.14	372.42	30.69

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	123.47	30.87	122.48	432.94	203.49	0.00	620.91	564.20	0.199	0.00	0.25	7.212	A
1	401.27	100.32	398.22	228.89	97.09	0.00	920.80	631.67	0.436	0.00	0.76	6.850	A
2	398.26	99.56	392.87	251.75	243.56	0.00	684.76	585.95	0.582	0.00	1.35	12.122	B

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	147.43	36.86	147.12	519.33	244.01	0.00	597.94	564.20	0.247	0.25	0.32	7.979	A
1	479.16	119.79	477.78	274.51	116.62	0.00	904.67	631.67	0.530	0.76	1.10	8.405	A
2	475.56	118.89	471.10	302.17	292.24	0.00	655.67	585.95	0.725	1.35	2.46	19.040	C

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	180.57	45.14	180.04	626.37	289.44	0.00	572.17	564.20	0.316	0.32	0.45	9.170	A
1	586.84	146.71	583.63	326.77	142.72	0.00	883.12	631.67	0.665	1.10	1.91	11.891	B
2	582.44	145.61	558.81	369.35	357.00	0.00	616.97	585.95	0.944	2.46	8.37	48.807	E

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	180.57	45.14	180.54	635.64	297.42	0.00	567.65	564.20	0.318	0.45	0.46	9.298	A
1	586.84	146.71	586.70	334.85	143.11	0.00	882.80	631.67	0.665	1.91	1.94	12.141	B
2	582.44	145.61	574.21	370.96	358.85	0.00	615.86	585.95	0.946	8.37	10.42	68.518	F

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	147.43	36.86	147.93	538.75	261.93	0.00	587.77	564.20	0.251	0.46	0.34	8.193	A
1	479.16	119.79	482.34	292.60	117.26	0.00	904.15	631.67	0.530	1.94	1.15	8.599	A
2	475.56	118.89	505.70	304.61	294.98	0.00	654.03	585.95	0.727	10.42	2.89	28.132	D

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	123.47	30.87	123.81	441.09	209.28	0.00	617.63	564.20	0.200	0.34	0.25	7.294	A
1	401.27	100.32	402.73	234.95	98.14	0.00	919.93	631.67	0.436	1.15	0.78	6.982	A
2	398.26	99.56	404.05	254.56	246.32	0.00	683.11	585.95	0.583	2.89	1.44	13.154	B

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	3.55	0.24	7.212	A	A
1	10.94	0.73	6.850	A	A
2	18.65	1.24	12.122	B	B

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	4.73	0.32	7.979	A	A
1	15.94	1.06	8.405	A	A
2	33.55	2.24	19.040	C	B

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	6.60	0.44	9.170	A	A
1	26.81	1.79	11.891	B	B
2	94.22	6.28	48.807	E	D

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	6.89	0.46	9.298	A	A
1	28.95	1.93	12.141	B	B
2	142.59	9.51	68.518	F	E

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	5.23	0.35	8.193	A	A
1	18.09	1.21	8.599	A	A
2	60.03	4.00	28.132	D	C

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	3.88	0.26	7.294	A	A
1	12.17	0.81	6.982	A	A
2	23.27	1.55	13.154	B	B

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	0.25	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
1	0.76	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
2	1.35	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:00-08:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	0.32	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
1	1.10	0.00	0.00	1.00	2.00			N/A	N/A
2	2.46	0.00	0.00	5.00	8.00			N/A	N/A

Queue Variation results: (08:15-08:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	0.45	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
1	1.91	0.00	0.00	0.00	3.00			N/A	N/A
2	8.37	0.00	2.00	21.00	30.00			N/A	N/A

Queue Variation results: (08:30-08:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	0.46	0.00	0.00	0.00	1.00			N/A	N/A
1	1.94	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
2	10.42	0.00	1.00	27.00	41.00			N/A	N/A

Queue Variation results: (08:45-09:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	0.34	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
1	1.15	0.00	0.00	2.00	2.00			N/A	N/A
2	2.89	0.00	0.00	5.00	10.00			N/A	N/A

Queue Variation results: (09:00-09:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	0.25	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
1	0.78	0.00	0.00	1.00	2.00			N/A	N/A
2	1.44	0.00	0.00	1.00	4.00			N/A	N/A

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base, PM	2023 Base	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	Asda Link/ B5110	Mini-roundabout	3,1,2	26.05	D

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
3	3	Ffordd Cae Sel	
1	1	B5110 S	
2	2	B5110 N	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
3	0.00	99999.00		0.00
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
3	3.56	3.56	5.74	2.40	14.81	11.23	0.00	
1	3.40	3.40	3.40	0.00	20.00	20.00	0.00	
2	3.54	3.54	3.70	5.11	13.89	10.52	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
3		(calculated)	(calculated)	0.567	736.311
1		(calculated)	(calculated)	1.101	1334.631
2		(calculated)	(calculated)	0.543	754.840

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
3	None			
1	Percentage			75.00
2	Percentage			110.00

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
3	ONE HOUR	✓	375.00	100.000
1	ONE HOUR	✓	584.00	100.000
2	ONE HOUR	✓	319.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		3	1	2
From	3	12.000	74.000	289.000
	1	308.000	0.000	276.000
	2	135.000	184.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		3	1	2
From	3	0.03	0.20	0.77
	1	0.53	0.00	0.47
	2	0.42	0.58	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		3	1	2
From	3	1.000	1.000	1.000
	1	1.000	1.000	1.000
	2	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		3	1	2
From	3	0.0	0.0	0.0
	1	0.0	0.0	0.0
	2	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
3	0.66	17.20	1.93	4.00	C	344.11	516.16	110.47	12.84	1.23	110.50	12.84
1	0.88	38.68	6.46	24.00	E	535.89	803.83	263.99	19.71	2.93	264.05	19.71
2	0.57	13.34	1.28	2.00	B	292.72	439.08	76.16	10.41	0.85	76.17	10.41

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	282.32	70.58	279.37	339.15	137.30	0.00	658.45	534.71	0.429	0.00	0.74	9.426	A
1	439.67	109.92	435.09	192.43	224.24	0.00	815.80	646.57	0.539	0.00	1.14	9.349	A
2	240.16	60.04	238.04	420.93	238.41	0.00	687.84	616.30	0.349	0.00	0.53	7.967	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	337.12	84.28	335.77	406.84	164.89	0.00	642.80	534.71	0.524	0.74	1.07	11.670	B
1	525.00	131.25	521.65	231.15	269.51	0.00	778.43	646.57	0.674	1.14	1.98	13.835	B
2	286.77	71.69	285.87	505.30	285.86	0.00	659.48	616.30	0.435	0.53	0.76	9.611	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	412.88	103.22	409.68	492.11	201.46	0.00	622.07	534.71	0.664	1.07	1.88	16.693	C
1	643.00	160.75	627.98	282.30	328.84	0.00	729.44	646.57	0.882	1.98	5.74	31.623	D
2	351.23	87.81	349.27	612.51	344.30	0.00	624.55	616.30	0.562	0.76	1.25	12.982	B

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	412.88	103.22	412.68	499.38	202.51	0.00	621.47	534.71	0.664	1.88	1.93	17.198	C
1	643.00	160.75	640.11	283.95	331.25	0.00	727.45	646.57	0.884	5.74	6.46	38.675	E
2	351.23	87.81	351.09	620.56	350.80	0.00	620.67	616.30	0.566	1.25	1.28	13.338	B

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	337.12	84.28	340.28	418.94	166.52	0.00	641.88	534.71	0.525	1.93	1.14	12.057	B
1	525.00	131.25	542.05	233.67	273.13	0.00	775.44	646.57	0.677	6.46	2.20	16.433	C
2	286.77	71.69	288.70	518.41	296.76	0.00	652.97	616.30	0.439	1.28	0.80	9.933	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	282.32	70.58	283.80	345.12	139.10	0.00	657.43	534.71	0.429	1.14	0.77	9.672	A
1	439.67	109.92	443.64	195.11	227.79	0.00	812.87	646.57	0.541	2.20	1.20	9.853	A
2	240.16	60.04	241.16	428.38	243.06	0.00	685.06	616.30	0.351	0.80	0.55	8.128	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	10.46	0.70	9.426	A	A
1	16.10	1.07	9.349	A	A
2	7.59	0.51	7.967	A	A

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	15.38	1.03	11.670	B	B
1	27.65	1.84	13.835	B	B
2	10.92	0.73	9.611	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	26.00	1.73	16.693	C	B
1	70.16	4.68	31.623	D	C
2	17.63	1.18	12.982	B	B

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	28.58	1.91	17.198	C	B
1	92.36	6.16	38.675	E	D
2	19.00	1.27	13.338	B	B

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	18.06	1.20	12.057	B	B
1	38.62	2.57	16.433	C	B
2	12.53	0.84	9.933	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	11.98	0.80	9.672	A	A
1	19.09	1.27	9.853	A	A
2	8.49	0.57	8.128	A	A

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	0.74	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
1	1.14	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
2	0.53	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	1.07	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
1	1.98	0.00	0.00	4.00	6.00			N/A	N/A
2	0.76	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	1.88	0.00	0.00	0.00	4.00			N/A	N/A
1	5.74	0.00	0.00	13.00	22.00			N/A	N/A
2	1.25	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	1.93	0.00	0.00	0.00	3.00			N/A	N/A
1	6.46	0.00	0.00	11.00	24.00			N/A	N/A
2	1.28	0.00	0.00	0.00	2.00			N/A	N/A

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	1.14	0.00	0.00	2.00	3.00			N/A	N/A
1	2.20	0.00	0.00	4.00	7.00			N/A	N/A
2	0.80	0.00	0.00	0.00	1.00			N/A	N/A

Queue Variation results: (17:30-17:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	0.77	0.00	0.00	1.00	2.00			N/A	N/A
1	1.20	0.00	0.00	1.00	3.00			N/A	N/A
2	0.55	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base + Dev, AM	2023 Base + Dev	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	Asda Link/ B5110	Mini-roundabout	3,1,2	232.11	F

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Am	Name	Description
3	3	Ffordd Cae Sel	
1	1	B5110 S	
2	2	B5110 N	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
3	0.00	99999.00		0.00
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
3	3.56	3.56	5.74	2.40	14.81	11.23	0.00	
1	3.40	3.40	3.40	0.00	20.00	20.00	0.00	
2	3.54	3.54	3.70	5.11	13.89	10.52	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
3		(calculated)	(calculated)	0.567	736.311
1		(calculated)	(calculated)	1.101	1334.631
2		(calculated)	(calculated)	0.543	754.840

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
3	None			
1	Percentage			75.00
2	Percentage			110.00

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
3	ONE HOUR	✓	371.00	100.000
1	ONE HOUR	✓	533.00	100.000
2	ONE HOUR	✓	706.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		3	1	2
From	3	10.000	34.000	327.000
	1	316.000	0.000	217.000
	2	432.000	274.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		3	1	2
From	3	0.03	0.09	0.88
	1	0.59	0.00	0.41
	2	0.61	0.39	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		3	1	2
From	3	1.000	1.000	1.000
	1	1.000	1.000	1.000
	2	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		3	1	2
From	3	0.0	0.0	0.0
	1	0.0	0.0	0.0
	2	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
3	0.68	18.64	2.06	5.00	C	340.44	510.65	122.30	14.37	1.36	122.34	14.37
1	0.84	31.80	4.89	17.00	D	489.09	733.64	213.29	17.44	2.37	213.33	17.45
2	1.26	495.50	90.85	144.00	F	647.84	971.76	4076.07	251.67	45.29	4198.37	259.22

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	279.31	69.83	276.12	560.55	201.43	0.00	622.08	598.73	0.449	0.00	0.80	10.315	B
1	401.27	100.32	397.26	226.74	250.81	0.00	793.87	551.88	0.505	0.00	1.00	8.990	A
2	531.51	132.88	519.02	405.11	242.97	0.00	685.12	625.13	0.776	0.00	3.12	20.380	C

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	333.52	83.38	331.91	662.52	235.39	0.00	602.82	598.73	0.553	0.80	1.20	13.205	B
1	479.16	119.79	476.40	265.81	301.49	0.00	752.02	551.88	0.637	1.00	1.69	12.929	B
2	634.68	158.67	606.52	486.50	291.39	0.00	656.18	625.13	0.967	3.12	10.16	53.785	F

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	408.48	102.12	405.26	729.21	239.10	0.00	600.72	598.73	0.680	1.20	2.01	18.107	C
1	586.84	146.71	575.71	276.24	368.12	0.00	697.00	551.88	0.842	1.69	4.48	27.451	D
2	777.32	194.33	616.07	591.58	352.24	0.00	619.81	625.14	1.254	10.16	50.48	192.994	F

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	408.48	102.12	408.26	734.78	239.01	0.00	600.77	598.73	0.680	2.01	2.06	18.640	C
1	586.84	146.71	585.19	276.42	370.85	0.00	694.75	551.88	0.845	4.48	4.89	31.804	D
2	777.32	194.33	615.84	598.09	357.95	0.00	616.40	625.14	1.261	50.48	90.85	417.500	F

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	333.52	83.38	336.49	694.26	249.83	0.00	594.63	598.73	0.561	2.06	1.32	14.102	B
1	479.16	119.79	491.32	280.67	305.65	0.00	748.58	551.88	0.640	4.89	1.85	14.597	B
2	634.68	158.67	643.73	496.61	300.36	0.00	650.82	625.13	0.975	90.85	88.59	495.503	F

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	279.31	69.83	280.88	660.32	261.92	0.00	587.78	598.73	0.475	1.32	0.93	11.792	B
1	401.27	100.32	404.46	287.66	255.14	0.00	790.29	551.88	0.508	1.85	1.05	9.407	A
2	531.51	132.88	674.87	412.23	247.36	0.00	682.49	625.13	0.779	88.59	52.75	379.261	F

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	11.28	0.75	10.315	B	B
1	14.18	0.95	8.990	A	A
2	40.16	2.68	20.380	C	C

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	17.08	1.14	13.205	B	B
1	23.78	1.59	12.929	B	B
2	112.24	7.48	53.785	F	D

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	27.75	1.85	18.107	C	B
1	56.66	3.78	27.451	D	C
2	457.77	30.52	192.994	F	F

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	30.59	2.04	18.640	C	B
1	70.82	4.72	31.804	D	C
2	1060.15	70.68	417.500	F	F

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	21.05	1.40	14.102	B	B
1	31.24	2.08	14.597	B	B
2	1345.76	89.72	495.503	F	F

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	14.56	0.97	11.792	B	B
1	16.61	1.11	9.407	A	A
2	1059.99	70.67	379.261	F	F

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	0.80	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
1	1.00	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
2	3.12	0.00	0.00	7.00	11.00			N/A	N/A

Queue Variation results: (08:00-08:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	1.20	0.00	0.00	1.00	2.00			N/A	N/A
1	1.69	0.00	0.00	3.00	5.00			N/A	N/A
2	10.16	0.00	5.00	24.00	33.00			N/A	N/A

Queue Variation results: (08:15-08:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	2.01	0.00	0.00	1.00	5.00			N/A	N/A
1	4.48	0.00	0.00	9.00	17.00			N/A	N/A
2	50.48	22.00	47.00	76.00	86.00			N/A	N/A

Queue Variation results: (08:30-08:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	2.06	0.00	0.00	0.00	3.00			N/A	N/A
1	4.89	0.00	0.00	6.00	17.00			N/A	N/A
2	90.85	50.00	87.00	126.00	138.00			N/A	N/A

Queue Variation results: (08:45-09:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	1.32	0.00	0.00	2.00	3.00			N/A	N/A
1	1.85	0.00	0.00	3.00	6.00			N/A	N/A
2	88.59	44.00	84.00	129.00	144.00			N/A	N/A

Queue Variation results: (09:00-09:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	0.93	0.00	0.00	1.00	2.00			N/A	N/A
1	1.05	0.00	0.00	1.00	3.00			N/A	N/A
2	52.75	16.00	47.00	89.00	104.00			N/A	N/A

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base + Dev, PM	2023 Base + Dev	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	Asda Link/ B5110	Mini-roundabout	3,1,2	149.26	F

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
3	3	Ffordd Cae Sel	
1	1	B5110 S	
2	2	B5110 N	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
3	0.00	99999.00		0.00
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
3	3.56	3.56	5.74	2.40	14.81	11.23	0.00	
1	3.40	3.40	3.40	0.00	20.00	20.00	0.00	
2	3.54	3.54	3.70	5.11	13.89	10.52	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
3		(calculated)	(calculated)	0.567	736.311
1		(calculated)	(calculated)	1.101	1334.631
2		(calculated)	(calculated)	0.543	754.840

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
3	None			
1	Percentage			75.00
2	Percentage			110.00

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
3	ONE HOUR	✓	582.00	100.000
1	ONE HOUR	✓	584.00	100.000
2	ONE HOUR	✓	526.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		3	1	2
From	3	12.000	74.000	496.000
	1	308.000	0.000	276.000
	2	342.000	184.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		3	1	2
From	3	0.02	0.13	0.85
	1	0.53	0.00	0.47
	2	0.65	0.35	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		3	1	2
From	3	1.000	1.000	1.000
	1	1.000	1.000	1.000
	2	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		3	1	2
From	3	0.0	0.0	0.0
	1	0.0	0.0	0.0
	2	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
3	1.03	127.20	22.99	66.00	F	534.05	801.08	741.02	55.50	8.23	741.22	55.52
1	1.14	263.74	46.33	87.00	F	535.89	803.83	1672.96	124.87	18.59	1673.15	124.89
2	0.90	46.58	6.98	27.00	E	482.67	724.00	303.09	25.12	3.37	303.22	25.13

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	438.16	109.54	430.61	491.28	136.69	0.00	658.80	608.26	0.665	0.00	1.89	15.315	C
1	439.67	109.92	432.94	191.44	375.86	0.00	690.61	562.57	0.637	0.00	1.68	13.641	B
2	396.00	99.00	390.75	571.59	237.21	0.00	688.56	645.51	0.575	0.00	1.31	11.891	B

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	523.21	130.80	515.59	586.91	163.97	0.00	643.33	608.26	0.813	1.89	3.79	26.643	D
1	525.00	131.25	514.82	229.52	450.03	0.00	629.36	562.57	0.834	1.68	4.23	29.118	D
2	472.86	118.22	468.73	682.71	282.15	0.00	661.70	645.51	0.715	1.31	2.35	18.257	C

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	640.79	160.20	595.29	673.49	197.29	0.00	624.43	608.26	1.026	3.79	15.17	74.343	F
1	643.00	160.75	558.44	272.98	519.60	0.00	571.91	562.57	1.124	4.23	25.37	113.998	F
2	579.14	144.78	563.98	771.25	306.79	0.00	646.97	645.51	0.895	2.35	6.14	37.756	E

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	640.79	160.20	609.49	681.80	201.40	0.00	622.10	608.26	1.030	15.17	22.99	127.195	F
1	643.00	160.75	559.14	278.90	531.99	0.00	561.68	562.57	1.145	25.37	46.33	244.836	F
2	579.14	144.78	575.75	783.68	307.46	0.00	646.58	645.51	0.896	6.14	6.98	46.580	E

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	523.21	130.80	592.10	626.58	171.05	0.00	639.31	608.26	0.818	22.99	5.77	83.674	F
1	525.00	131.25	562.08	246.34	516.82	0.00	574.21	562.57	0.914	46.33	37.06	263.743	F
2	472.86	118.22	488.98	770.25	308.65	0.00	645.86	645.51	0.732	6.98	2.95	24.857	C

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
3	438.16	109.54	452.80	575.83	140.31	0.00	656.74	608.26	0.667	5.77	2.11	18.770	C
1	439.67	109.92	579.63	197.89	395.22	0.00	674.62	562.57	0.652	37.06	2.07	77.405	F
2	396.00	99.00	401.12	659.82	315.03	0.00	642.05	645.51	0.617	2.95	1.67	15.244	C

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	25.48	1.70	15.315	C	B
1	22.96	1.53	13.641	B	B
2	18.21	1.21	11.891	B	B

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	49.57	3.30	26.643	D	C
1	53.63	3.58	29.118	D	C
2	32.15	2.14	18.257	C	B

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	154.07	10.27	74.343	F	E
1	231.20	15.41	113.998	F	F
2	74.27	4.95	37.756	E	D

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	288.15	19.21	127.195	F	F
1	538.51	35.90	244.836	F	F
2	99.32	6.62	46.580	E	D

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	188.67	12.58	83.674	F	F
1	625.42	41.69	263.743	F	F
2	52.10	3.47	24.857	C	C

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
3	36.87	2.46	18.770	C	B
1	201.24	13.42	77.405	F	E
2	27.04	1.80	15.244	C	B

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	1.89	0.00	1.00	2.00	3.00			N/A	N/A
1	1.68	0.00	0.00	2.00	3.00			N/A	N/A
2	1.31	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	3.79	0.00	1.00	9.00	12.00			N/A	N/A
1	4.23	0.00	1.00	10.00	14.00			N/A	N/A
2	2.35	0.00	0.00	5.00	7.00			N/A	N/A

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	15.17	0.00	10.00	33.00	42.00			N/A	N/A
1	25.37	6.00	22.00	44.00	52.00			N/A	N/A
2	6.14	0.00	0.00	15.00	23.00			N/A	N/A

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	22.99	0.00	16.00	51.00	66.00			N/A	N/A
1	46.33	16.00	42.00	75.00	87.00			N/A	N/A
2	6.98	0.00	0.00	14.00	27.00			N/A	N/A

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	5.77	0.00	0.00	14.00	22.00			N/A	N/A
1	37.06	16.00	34.00	55.00	62.00			N/A	N/A
2	2.95	0.00	0.00	6.00	10.00			N/A	N/A

Queue Variation results: (17:30-17:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
3	2.11	0.00	0.00	1.00	6.00			N/A	N/A
1	2.07	0.00	0.00	0.00	5.00			N/A	N/A
2	1.67	0.00	0.00	2.00	5.00			N/A	N/A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\B5420 Fford Cae Sel\2018 DF
Report generation date: 14/06/2018 10:07:38

» (Default Analysis Set) - 2017 Base, AM
» (Default Analysis Set) - 2017 Base, PM
» (Default Analysis Set) - 2023 Base, AM
» (Default Analysis Set) - 2023 Base, PM
» (Default Analysis Set) - 2023 Base + Dev, AM
» (Default Analysis Set) - 2023 Base + Dev, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2017 Base										
Arm BstE	1.57	2.00	12.89	0.61	B	7.00	27.00	42.83	0.89	E
Arm Mill	0.18	~1	10.36	0.15	B	3.89	14.00	64.85	0.83	F
Arm BStW	0.00	~1	0.00	0.00	A	0.00	~1	0.00	0.00	A
Arm FCS	3.15	10.00	21.46	0.77	C	3.12	10.00	21.82	0.77	C
A1 - 2023 Base										
Arm BstE	1.87	3.00	14.57	0.66	B	11.31	45.00	65.02	0.95	F
Arm Mill	0.20	~1	10.94	0.16	B	6.89	26.00	107.00	0.93	F
Arm BStW	0.00	~1	0.00	0.00	A	0.00	~1	0.00	0.00	A
Arm FCS	4.08	14.00	26.56	0.81	D	3.96	13.00	26.49	0.81	D
A1 - 2023 Base + Dev										
Arm BstE	6.90	27.00	41.19	0.89	E	77.67	131.00	389.78	1.19	F
Arm Mill	0.26	~1	14.87	0.21	B	12.25	37.00	185.46	1.02	F
Arm BStW	0.00	~1	0.00	0.00	A	0.00	~1	0.00	0.00	A
Arm FCS	33.68	80.00	153.60	1.06	F	32.85	79.00	153.36	1.06	F

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:00 - 17:30
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:00 - 17:30
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:00 - 17:30

Run using Junctions 8.0.6.541 at 14/06/2018 10:07:32

File summary

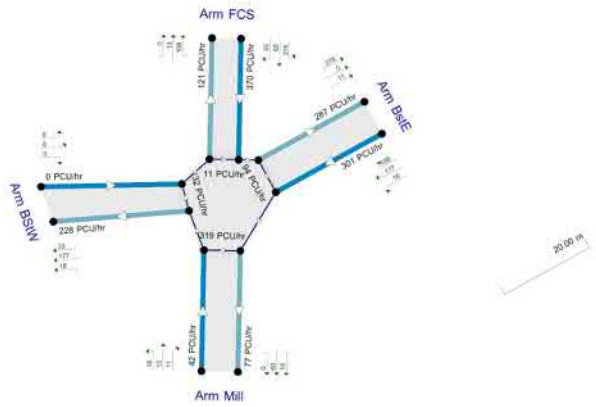
Title	(untitled)
Location	
Site Number	
Date	27/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	RogersA2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, AM	2017 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	Asda Link/ B5110 Bridge Street Rbout	Mini-roundabout	BstE,Mill,BStW,FCS	17.19	C

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
BstE	BstE	Bridge Street E	
Mill	Mil	Mill Street	
BStW	BStW	Bridge Street W	
FCS	FCS	Ffordd Cae Sel	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
BstE	0.00	99999.00
Mill	0.00	99999.00
BStW	0.00	99999.00
FCS	0.00	99999.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
BstE	3.56	3.56	5.00	2.00	14.81	11.23	0.00	
Mill	3.02	3.00	3.00	0.00	15.73	12.84	0.00	
BStW	3.00	3.00	3.00	0.00	15.23	13.50	0.00	
FCS	2.81	2.81	3.83	2.08	14.90	12.79	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
BstE		(calculated)	(calculated)	0.561	801.481
Mill		(calculated)	(calculated)	0.520	653.393
BStW		(calculated)	(calculated)	0.526	668.676
FCS		(calculated)	(calculated)	0.530	721.890

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
BstE	ONE HOUR	✓	404.00	100.000
Mill	ONE HOUR	✓	56.00	100.000
BStW	ONE HOUR	✓	0.00	100.000
FCS	ONE HOUR	✓	497.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowinPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	BstE	304.15	304.15		
07:45-08:00	Mill	42.16	42.16		
07:45-08:00	BStW	0.00	0.00		
07:45-08:00	FCS	374.17	374.17		
08:00-08:15	BstE	363.19	363.19		
08:00-08:15	Mill	50.34	50.34		
08:00-08:15	BStW	0.00	0.00		
08:00-08:15	FCS	446.79	446.79		
08:15-08:30	BstE	444.81	444.81		
08:15-08:30	Mill	61.66	61.66		
08:15-08:30	BStW	0.00	0.00		
08:15-08:30	FCS	547.21	547.21		
08:30-08:45	BstE	444.81	444.81		
08:30-08:45	Mill	61.66	61.66		
08:30-08:45	BStW	0.00	0.00		
08:30-08:45	FCS	547.21	547.21		
08:45-09:00	BstE	363.19	363.19		
08:45-09:00	Mill	50.34	50.34		
08:45-09:00	BStW	0.00	0.00		
08:45-09:00	FCS	446.79	446.79		
09:00-09:15	BstE	304.15	304.15		
09:00-09:15	Mill	42.16	42.16		
09:00-09:15	BStW	0.00	0.00		
09:00-09:15	FCS	374.17	374.17		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		BstE	Mill	BStW	FCS
From	BstE	0.000	22.000	237.000	145.000
	Mill	15.000	0.000	24.000	17.000
	BStW	0.000	0.000	0.000	0.000
	FCS	371.000	81.000	45.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		BstE	Mill	BStW	FCS
From	BstE	0.00	0.05	0.59	0.36
	Mill	0.27	0.00	0.43	0.30
	BStW	0.25	0.25	0.25	0.25
	FCS	0.75	0.16	0.09	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		BstE	Mill	BStW	FCS
From	BstE	1.000	1.000	1.000	1.000
	Mill	1.000	1.000	1.000	1.000
	BStW	1.000	1.000	1.000	1.000
	FCS	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		BstE	Mill	BStW	FCS
From	BstE	0.0	0.0	0.0	0.0
	Mill	0.0	0.0	0.0	0.0
	BStW	0.0	0.0	0.0	0.0
	FCS	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
BstE	0.61	12.89	1.57	2.00	B
Mill	0.15	10.36	0.18	−1	B
BStW	0.00	0.00	0.00	−1	A
FCS	0.77	21.46	3.15	10.00	C

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	304.15	301.46	93.78	0.00	748.87	0.406	0.67	7.999	A
Mill	42.16	41.78	318.53	0.00	487.73	0.086	0.09	8.066	A
BStW	0.00	0.00	132.07	0.00	599.16	0.000	0.00	0.000	A
FCS	374.17	369.89	11.19	0.00	715.96	0.523	1.07	10.281	B

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	363.19	362.09	112.72	0.00	738.24	0.492	0.95	9.541	A
Mill	50.34	50.22	382.63	0.00	454.40	0.111	0.12	8.904	A
BStW	0.00	0.00	158.66	0.00	585.16	0.000	0.00	0.000	A
FCS	446.79	444.64	13.45	0.00	714.76	0.625	1.61	13.215	B

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	444.81	442.46	137.30	0.00	724.46	0.614	1.54	12.656	B
Mill	61.66	61.45	467.40	0.00	410.31	0.150	0.17	10.312	B
BStW	0.00	0.00	193.92	0.00	566.60	0.000	0.00	0.000	A
FCS	547.21	541.56	16.46	0.00	713.16	0.767	3.02	20.308	C

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	444.81	444.70	138.60	0.00	723.73	0.615	1.57	12.888	B
Mill	61.66	61.65	469.98	0.00	408.96	0.151	0.18	10.364	B
BStW	0.00	0.00	194.84	0.00	566.12	0.000	0.00	0.000	A
FCS	547.21	546.71	16.51	0.00	713.14	0.767	3.15	21.458	C

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	363.19	365.49	114.71	0.00	737.13	0.493	0.99	9.747	A
Mill	50.34	50.54	386.55	0.00	452.36	0.111	0.13	8.963	A
BStW	0.00	0.00	160.06	0.00	584.43	0.000	0.00	0.000	A
FCS	446.79	452.45	13.54	0.00	714.71	0.625	1.73	14.006	B

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	304.15	305.33	95.48	0.00	747.92	0.407	0.70	8.157	A
Mill	42.16	42.28	322.81	0.00	485.51	0.087	0.10	8.125	A
BStW	0.00	0.00	133.75	0.00	598.27	0.000	0.00	0.000	A
FCS	374.17	376.61	11.33	0.00	715.89	0.523	1.12	10.687	B

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	0.67	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
Mill	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	1.07	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:00-08:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	0.95	0.00	0.00	1.00	1.00			N/A	N/A
Mill	0.12	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	1.61	0.00	0.00	3.00	4.00			N/A	N/A

Queue Variation results: (08:15-08:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	1.54	0.00	0.00	0.00	2.00			N/A	N/A
Mill	0.17	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	3.02	0.00	0.00	3.00	10.00			N/A	N/A

Queue Variation results: (08:30-08:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	1.57	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
Mill	0.18	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	3.15	0.00	0.00	0.00	7.00			N/A	N/A

Queue Variation results: (08:45-09:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	0.99	0.00	0.00	1.00	2.00			N/A	N/A
Mill	0.13	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	1.73	0.00	0.00	3.00	5.00			N/A	N/A

Queue Variation results: (09:00-09:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	0.70	0.00	0.00	1.00	1.00			N/A	N/A
Mill	0.10	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	1.12	0.00	0.00	2.00	3.00			N/A	N/A

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, PM	2017 Base	PM		ONE HOUR	16:00	17:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	Asda Link/ B5110 Bridge Street Rbout	Mini-roundabout	BstE,Mill,BStW,FCS	38.48	E

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
BstE	BstE	Bridge Street E	
Mill	Mill	Mill Street	
BStW	BStW	Bridge Street W	
FCS	FCS	Ffordd Cae Sel	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
BstE	0.00	99999.00
Mill	0.00	99999.00
BStW	0.00	99999.00
FCS	0.00	99999.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
BstE	3.56	3.56	5.00	2.00	14.81	11.23	0.00	
Mill	3.02	3.00	3.00	0.00	15.73	12.84	0.00	
BStW	3.00	3.00	3.00	0.00	15.23	13.50	0.00	
FCS	2.81	2.81	3.83	2.08	14.90	12.79	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
BstE		(calculated)	(calculated)	0.561	801.481
Mill		(calculated)	(calculated)	0.520	653.393
BStW		(calculated)	(calculated)	0.526	668.676
FCS		(calculated)	(calculated)	0.530	721.890

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
BstE	ONE HOUR	✓	573.00	100.000
Mill	ONE HOUR	✓	212.00	100.000
BStW	ONE HOUR	✓	0.00	100.000
FCS	ONE HOUR	✓	485.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowinPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:00-16:15	BstE	431.38	431.38		
16:00-16:15	Mill	159.60	159.60		
16:00-16:15	BStW	0.00	0.00		
16:00-16:15	FCS	365.13	365.13		
16:15-16:30	BstE	515.12	515.12		
16:15-16:30	Mill	190.58	190.58		
16:15-16:30	BStW	0.00	0.00		
16:15-16:30	FCS	436.01	436.01		
16:30-16:45	BstE	630.88	630.88		
16:30-16:45	Mill	233.42	233.42		
16:30-16:45	BStW	0.00	0.00		
16:30-16:45	FCS	533.99	533.99		
16:45-17:00	BstE	630.88	630.88		
16:45-17:00	Mill	233.42	233.42		
16:45-17:00	BStW	0.00	0.00		
16:45-17:00	FCS	533.99	533.99		
17:00-17:15	BstE	515.12	515.12		
17:00-17:15	Mill	190.58	190.58		
17:00-17:15	BStW	0.00	0.00		
17:00-17:15	FCS	436.01	436.01		
17:15-17:30	BstE	431.38	431.38		
17:15-17:30	Mill	159.60	159.60		
17:15-17:30	BStW	0.00	0.00		
17:15-17:30	FCS	365.13	365.13		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		BstE	Mill	BStW	FCS
From	BstE	0.000	24.000	262.000	287.000
	Mill	43.000	0.000	100.000	69.000
	BStW	0.000	0.000	0.000	0.000
	FCS	329.000	54.000	102.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		BstE	Mill	BStW	FCS
From	BstE	0.00	0.04	0.46	0.50
	Mill	0.20	0.00	0.47	0.33
	BStW	0.25	0.25	0.25	0.25
	FCS	0.68	0.11	0.21	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		BstE	Mill	BStW	FCS
From	BstE	1.000	1.000	1.000	1.000
	Mill	1.000	1.000	1.000	1.000
	BStW	1.000	1.000	1.000	1.000
	FCS	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		BstE	Mill	BStW	FCS
From	BstE	0.0	0.0	0.0	0.0
	Mill	0.0	0.0	0.0	0.0
	BStW	0.0	0.0	0.0	0.0
	FCS	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
BstE	0.89	42.83	7.00	27.00	E
Mill	0.83	64.85	3.89	14.00	F
BStW	0.00	0.00	0.00	−1	A
FCS	0.77	21.82	3.12	10.00	C

Main Results for each time segment

Main results: (16:00-16:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	431.38	425.90	116.10	0.00	736.35	0.586	1.37	11.407	B
Mill	159.60	157.04	483.97	0.00	401.69	0.397	0.64	14.570	B
BStW	0.00	0.00	296.28	0.00	512.72	0.000	0.00	0.000	A
FCS	365.13	360.94	31.85	0.00	705.01	0.518	1.05	10.343	B

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	515.12	511.27	139.55	0.00	723.19	0.712	2.33	16.673	C
Mill	190.58	188.63	581.10	0.00	351.17	0.543	1.13	21.880	C
BStW	0.00	0.00	355.73	0.00	481.43	0.000	0.00	0.000	A
FCS	436.01	433.87	38.26	0.00	701.61	0.621	1.58	13.333	B

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	630.88	615.51	169.95	0.00	706.14	0.893	6.18	34.856	D
Mill	233.42	224.90	700.85	0.00	288.89	0.808	3.26	50.709	F
BStW	0.00	0.00	427.11	0.00	443.86	0.000	0.00	0.000	A
FCS	533.99	528.38	45.62	0.00	697.71	0.765	2.99	20.577	C

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	630.88	627.58	171.59	0.00	705.22	0.895	7.00	42.834	E
Mill	233.42	230.91	713.49	0.00	282.32	0.827	3.89	64.850	F
BStW	0.00	0.00	436.33	0.00	439.01	0.000	0.00	0.000	A
FCS	533.99	533.47	46.84	0.00	697.06	0.766	3.12	21.821	C

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	515.12	532.51	142.05	0.00	721.79	0.714	2.65	20.509	C
Mill	190.58	200.71	603.09	0.00	339.74	0.561	1.35	27.516	D
BStW	0.00	0.00	372.76	0.00	472.47	0.000	0.00	0.000	A
FCS	436.01	441.63	40.71	0.00	700.31	0.623	1.71	14.202	B

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	431.38	436.15	118.23	0.00	735.16	0.587	1.46	12.225	B
Mill	159.60	162.24	495.18	0.00	395.86	0.403	0.69	15.577	C
BStW	0.00	0.00	304.17	0.00	508.57	0.000	0.00	0.000	A
FCS	365.13	367.58	32.91	0.00	704.45	0.518	1.10	10.762	B

Queue Variation Results for each time segment

Queue Variation results: (16:00-16:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	1.37	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
Mill	0.64	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	1.05	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	2.33	0.00	0.00	5.00	7.00			N/A	N/A
Mill	1.13	0.00	0.00	1.00	2.00			N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	1.58	0.00	0.00	3.00	4.00			N/A	N/A

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	6.18	0.00	0.00	15.00	24.00			N/A	N/A
Mill	3.26	0.00	0.00	7.00	12.00			N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	2.99	0.00	0.00	3.00	10.00			N/A	N/A

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	7.00	0.00	0.00	14.00	27.00			N/A	N/A
Mill	3.89	0.00	0.00	7.00	14.00			N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	3.12	0.00	0.00	1.00	7.00			N/A	N/A

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	2.65	0.00	0.00	5.00	9.00			N/A	N/A
Mill	1.35	0.00	0.00	2.00	4.00			N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	1.71	0.00	0.00	3.00	5.00			N/A	N/A

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	1.46	0.00	0.00	1.00	4.00			N/A	N/A
Mill	0.69	0.00	0.00	0.00	2.00			N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	1.10	0.00	0.00	2.00	3.00			N/A	N/A

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, AM	2023 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	Asda Link/ B5110 Bridge Street Rbout	Mini-roundabout	BstE,Mill,BStW,FCS	20.58	C

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
BstE	BstE	Bridge Street E	
Mill	Mill	Mill Street	
BStW	BStW	Bridge Street W	
FCS	FCS	Ffordd Cae Sel	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
BstE	0.00	99999.00
Mill	0.00	99999.00
BStW	0.00	99999.00
FCS	0.00	99999.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
BstE	3.56	3.56	5.00	2.00	14.81	11.23	0.00	
Mill	3.02	3.00	3.00	0.00	15.73	12.84	0.00	
BStW	3.00	3.00	3.00	0.00	15.23	13.50	0.00	
FCS	2.81	2.81	3.83	2.08	14.90	12.79	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
BstE		(calculated)	(calculated)	0.561	801.481
Mill		(calculated)	(calculated)	0.520	653.393
BStW		(calculated)	(calculated)	0.526	668.676
FCS		(calculated)	(calculated)	0.530	721.890

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
BstE	ONE HOUR	✓	429.00	100.000
Mill	ONE HOUR	✓	59.00	100.000
BStW	ONE HOUR	✓	0.00	100.000
FCS	ONE HOUR	✓	527.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	BstE	322.97	322.97		
07:45-08:00	Mill	44.42	44.42		
07:45-08:00	BStW	0.00	0.00		
07:45-08:00	FCS	396.75	396.75		
08:00-08:15	BstE	385.66	385.66		
08:00-08:15	Mill	53.04	53.04		
08:00-08:15	BStW	0.00	0.00		
08:00-08:15	FCS	473.76	473.76		
08:15-08:30	BstE	472.34	472.34		
08:15-08:30	Mill	64.96	64.96		
08:15-08:30	BStW	0.00	0.00		
08:15-08:30	FCS	580.24	580.24		
08:30-08:45	BstE	472.34	472.34		
08:30-08:45	Mill	64.96	64.96		
08:30-08:45	BStW	0.00	0.00		
08:30-08:45	FCS	580.24	580.24		
08:45-09:00	BstE	385.66	385.66		
08:45-09:00	Mill	53.04	53.04		
08:45-09:00	BStW	0.00	0.00		
08:45-09:00	FCS	473.76	473.76		
09:00-09:15	BstE	322.97	322.97		
09:00-09:15	Mill	44.42	44.42		
09:00-09:15	BStW	0.00	0.00		
09:00-09:15	FCS	396.75	396.75		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		BstE	Mill	BStW	FCS
From	BstE	0.000	24.000	251.000	154.000
	Mill	16.000	0.000	25.000	18.000
	BStW	0.000	0.000	0.000	0.000
	FCS	393.000	86.000	48.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		BstE	Mill	BStW	FCS
From	BstE	0.00	0.06	0.59	0.36
	Mill	0.27	0.00	0.42	0.31
	BStW	0.25	0.25	0.25	0.25
	FCS	0.75	0.16	0.09	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		BstE	Mill	BStW	FCS
From	BstE	1.000	1.000	1.000	1.000
	Mill	1.000	1.000	1.000	1.000
	BStW	1.000	1.000	1.000	1.000
	FCS	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		BstE	Mill	BStW	FCS
From	BstE	0.0	0.0	0.0	0.0
	Mill	0.0	0.0	0.0	0.0
	BStW	0.0	0.0	0.0	0.0
	FCS	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
BstE	0.66	14.57	1.87	3.00	B
Mill	0.16	10.94	0.20	−1	B
BStW	0.00	0.00	0.00	−1	A
FCS	0.81	26.56	4.08	14.00	D

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	322.97	319.97	99.65	0.00	745.58	0.433	0.75	8.401	A
Mill	44.42	44.01	337.76	0.00	477.73	0.093	0.10	8.293	A
BStW	0.00	0.00	140.22	0.00	594.87	0.000	0.00	0.000	A
FCS	396.75	391.91	11.94	0.00	715.56	0.554	1.21	10.967	B

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	385.66	384.34	119.78	0.00	734.29	0.525	1.08	10.247	B
Mill	53.04	52.91	405.75	0.00	442.37	0.120	0.13	9.240	A
BStW	0.00	0.00	168.46	0.00	580.00	0.000	0.00	0.000	A
FCS	473.76	471.07	14.35	0.00	714.28	0.663	1.88	14.630	B

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	472.34	469.35	145.53	0.00	719.84	0.656	1.83	14.197	B
Mill	64.96	64.72	495.22	0.00	395.84	0.164	0.19	10.864	B
BStW	0.00	0.00	205.78	0.00	560.36	0.000	0.00	0.000	A
FCS	580.24	572.36	17.55	0.00	712.59	0.814	3.85	24.352	C

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	472.34	472.17	147.31	0.00	718.85	0.657	1.87	14.565	B
Mill	64.96	64.95	498.52	0.00	394.12	0.165	0.20	10.936	B
BStW	0.00	0.00	206.93	0.00	559.76	0.000	0.00	0.000	A
FCS	580.24	579.33	17.61	0.00	712.55	0.814	4.08	26.561	D

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	385.66	388.60	122.52	0.00	732.75	0.526	1.14	10.549	B
Mill	53.04	53.27	410.75	0.00	439.77	0.121	0.14	9.319	A
BStW	0.00	0.00	170.19	0.00	579.09	0.000	0.00	0.000	A
FCS	473.76	481.85	14.45	0.00	714.23	0.663	2.06	15.986	C

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	322.97	324.41	101.68	0.00	744.44	0.434	0.78	8.599	A
Mill	44.42	44.56	342.68	0.00	475.17	0.093	0.10	8.362	A
BStW	0.00	0.00	142.13	0.00	593.86	0.000	0.00	0.000	A
FCS	396.75	399.88	12.08	0.00	715.48	0.555	1.28	11.519	B

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	0.75	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
Mill	0.10	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	1.21	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:00-08:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	1.08	0.00	0.00	1.00	2.00			N/A	N/A
Mill	0.13	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	1.88	0.00	0.00	4.00	5.00			N/A	N/A

Queue Variation results: (08:15-08:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	1.83	0.00	0.00	0.00	3.00			N/A	N/A
Mill	0.19	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	3.85	0.00	0.00	7.00	14.00			N/A	N/A

Queue Variation results: (08:30-08:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	1.87	0.00	0.00	0.00	2.00			N/A	N/A
Mill	0.20	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	4.08	0.00	0.00	3.00	12.00			N/A	N/A

Queue Variation results: (08:45-09:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	1.14	0.00	0.00	2.00	2.00			N/A	N/A
Mill	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	2.06	0.00	0.00	4.00	7.00			N/A	N/A

Queue Variation results: (09:00-09:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	0.78	0.00	0.00	1.00	2.00			N/A	N/A
Mill	0.10	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	1.28	0.00	0.00	2.00	4.00			N/A	N/A

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, PM	2023 Base	PM		ONE HOUR	16:00	17:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	Asda Link/ B5110 Bridge Street Rbout	Mini-roundabout	BstE,Mill,BStW,FCS	57.32	F

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
BstE	BstE	Bridge Street E	
Mill	Mill	Mill Street	
BStW	BStW	Bridge Street W	
FCS	FCS	Ffordd Cae Sel	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
BstE	0.00	99999.00
Mill	0.00	99999.00
BStW	0.00	99999.00
FCS	0.00	99999.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
BstE	3.56	3.56	5.00	2.00	14.81	11.23	0.00	
Mill	3.02	3.00	3.00	0.00	15.73	12.84	0.00	
BStW	3.00	3.00	3.00	0.00	15.23	13.50	0.00	
FCS	2.81	2.81	3.83	2.08	14.90	12.79	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
BstE		(calculated)	(calculated)	0.561	801.481
Mill		(calculated)	(calculated)	0.520	653.393
BStW		(calculated)	(calculated)	0.526	668.676
FCS		(calculated)	(calculated)	0.530	721.890

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
BstE	ONE HOUR	✓	604.00	100.000
Mill	ONE HOUR	✓	224.00	100.000
BStW	ONE HOUR	✓	0.00	100.000
FCS	ONE HOUR	✓	512.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:00-16:15	BstE	454.72	454.72		
16:00-16:15	Mill	168.64	168.64		
16:00-16:15	BStW	0.00	0.00		
16:00-16:15	FCS	385.46	385.46		
16:15-16:30	BstE	542.98	542.98		
16:15-16:30	Mill	201.37	201.37		
16:15-16:30	BStW	0.00	0.00		
16:15-16:30	FCS	460.28	460.28		
16:30-16:45	BstE	665.02	665.02		
16:30-16:45	Mill	246.63	246.63		
16:30-16:45	BStW	0.00	0.00		
16:30-16:45	FCS	563.72	563.72		
16:45-17:00	BstE	665.02	665.02		
16:45-17:00	Mill	246.63	246.63		
16:45-17:00	BStW	0.00	0.00		
16:45-17:00	FCS	563.72	563.72		
17:00-17:15	BstE	542.98	542.98		
17:00-17:15	Mill	201.37	201.37		
17:00-17:15	BStW	0.00	0.00		
17:00-17:15	FCS	460.28	460.28		
17:15-17:30	BstE	454.72	454.72		
17:15-17:30	Mill	168.64	168.64		
17:15-17:30	BStW	0.00	0.00		
17:15-17:30	FCS	385.46	385.46		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		BstE	Mill	BStW	FCS
From	BstE	0.000	25.000	276.000	303.000
	Mill	45.000	0.000	106.000	73.000
	BStW	0.000	0.000	0.000	0.000
	FCS	347.000	57.000	108.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		BstE	Mill	BStW	FCS
From	BstE	0.00	0.04	0.46	0.50
	Mill	0.20	0.00	0.47	0.33
	BStW	0.25	0.25	0.25	0.25
	FCS	0.68	0.11	0.21	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		BstE	Mill	BStW	FCS
From	BstE	1.000	1.000	1.000	1.000
	Mill	1.000	1.000	1.000	1.000
	BStW	1.000	1.000	1.000	1.000
	FCS	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		BstE	Mill	BStW	FCS
From	BstE	0.0	0.0	0.0	0.0
	Mill	0.0	0.0	0.0	0.0
	BStW	0.0	0.0	0.0	0.0
	FCS	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
BstE	0.95	65.02	11.31	45.00	F
Mill	0.93	107.00	6.89	26.00	F
BStW	0.00	0.00	0.00	−1	A
FCS	0.81	26.49	3.96	13.00	D

Main Results for each time segment

Main results: (16:00-16:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	454.72	448.41	122.70	0.00	732.65	0.621	1.58	12.408	B
Mill	168.64	165.66	510.17	0.00	388.06	0.435	0.74	15.984	C
BStW	0.00	0.00	312.22	0.00	504.34	0.000	0.00	0.000	A
FCS	385.46	380.75	33.28	0.00	704.25	0.547	1.18	10.976	B

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	542.98	537.88	147.49	0.00	718.74	0.755	2.85	19.349	C
Mill	201.37	198.71	612.15	0.00	335.02	0.601	1.41	25.903	D
BStW	0.00	0.00	374.51	0.00	471.55	0.000	0.00	0.000	A
FCS	460.28	457.66	39.92	0.00	700.73	0.657	1.83	14.643	B

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	665.02	640.14	179.22	0.00	700.94	0.949	9.07	46.468	E
Mill	246.63	232.22	730.95	0.00	273.24	0.903	5.01	71.199	F
BStW	0.00	0.00	443.46	0.00	435.25	0.000	0.00	0.000	A
FCS	563.72	556.14	46.65	0.00	697.16	0.809	3.73	24.263	C

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	665.02	656.07	181.38	0.00	699.73	0.950	11.31	65.025	F
Mill	246.63	239.11	747.63	0.00	264.56	0.932	6.89	106.995	F
BStW	0.00	0.00	455.08	0.00	429.14	0.000	0.00	0.000	A
FCS	563.72	562.81	48.04	0.00	696.43	0.809	3.96	26.493	D

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	542.98	574.53	150.82	0.00	716.87	0.757	3.42	29.434	D
Mill	201.37	221.19	649.47	0.00	315.62	0.638	1.94	43.946	E
BStW	0.00	0.00	404.74	0.00	455.64	0.000	0.00	0.000	A
FCS	460.28	468.01	44.44	0.00	698.34	0.659	2.02	16.114	C

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	454.72	461.60	125.22	0.00	731.23	0.622	1.70	13.669	B
Mill	168.64	173.11	524.46	0.00	380.63	0.443	0.82	17.695	C
BStW	0.00	0.00	322.75	0.00	498.79	0.000	0.00	0.000	A
FCS	385.46	388.57	34.78	0.00	703.46	0.548	1.24	11.545	B

Queue Variation Results for each time segment

Queue Variation results: (16:00-16:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	1.58	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
Mill	0.74	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	1.18	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	2.85	0.00	0.00	6.00	9.00			N/A	N/A
Mill	1.41	0.00	0.00	2.00	3.00			N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	1.83	0.00	0.00	3.00	5.00			N/A	N/A

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	9.07	0.00	3.00	23.00	33.00			N/A	N/A
Mill	5.01	0.00	1.00	12.00	17.00			N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	3.73	0.00	0.00	6.00	13.00			N/A	N/A

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	11.31	0.00	1.00	29.00	45.00			N/A	N/A
Mill	6.89	0.00	1.00	17.00	26.00			N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	3.96	0.00	0.00	2.00	12.00			N/A	N/A

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	3.42	0.00	0.00	7.00	12.00			N/A	N/A
Mill	1.94	0.00	0.00	4.00	6.00			N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	2.02	0.00	0.00	4.00	7.00			N/A	N/A

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	1.70	0.00	0.00	1.00	5.00			N/A	N/A
Mill	0.82	0.00	0.00	0.00	2.00			N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	1.24	0.00	0.00	2.00	4.00			N/A	N/A

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, AM	2023 Base + Dev	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	Asda Link/ B5110 Bridge Street Rbout	Mini-roundabout	BstE,Mill,BStW,FCS	97.92	F

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
BstE	BstE	Bridge Street E	
Mill	Mill	Mill Street	
BStW	BStW	Bridge Street W	
FCS	FCS	Ffordd Cae Sel	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
BstE	0.00	99999.00
Mill	0.00	99999.00
BStW	0.00	99999.00
FCS	0.00	99999.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
BstE	3.56	3.56	5.00	2.00	14.81	11.23	0.00	
Mill	3.02	3.00	3.00	0.00	15.73	12.84	0.00	
BStW	3.00	3.00	3.00	0.00	15.23	13.50	0.00	
FCS	2.81	2.81	3.83	2.08	14.90	12.79	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
BstE		(calculated)	(calculated)	0.561	801.481
Mill		(calculated)	(calculated)	0.520	653.393
BStW		(calculated)	(calculated)	0.526	668.676
FCS		(calculated)	(calculated)	0.530	721.890

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
BstE	ONE HOUR	✓	587.00	100.000
Mill	ONE HOUR	✓	59.00	100.000
BStW	ONE HOUR	✓	0.00	100.000
FCS	ONE HOUR	✓	686.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowinPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	BstE	441.92	441.92		
07:45-08:00	Mill	44.42	44.42		
07:45-08:00	BStW	0.00	0.00		
07:45-08:00	FCS	516.46	516.46		
08:00-08:15	BstE	527.70	527.70		
08:00-08:15	Mill	53.04	53.04		
08:00-08:15	BStW	0.00	0.00		
08:00-08:15	FCS	616.70	616.70		
08:15-08:30	BstE	646.30	646.30		
08:15-08:30	Mill	64.96	64.96		
08:15-08:30	BStW	0.00	0.00		
08:15-08:30	FCS	755.30	755.30		
08:30-08:45	BstE	646.30	646.30		
08:30-08:45	Mill	64.96	64.96		
08:30-08:45	BStW	0.00	0.00		
08:30-08:45	FCS	755.30	755.30		
08:45-09:00	BstE	527.70	527.70		
08:45-09:00	Mill	53.04	53.04		
08:45-09:00	BStW	0.00	0.00		
08:45-09:00	FCS	616.70	616.70		
09:00-09:15	BstE	441.92	441.92		
09:00-09:15	Mill	44.42	44.42		
09:00-09:15	BStW	0.00	0.00		
09:00-09:15	FCS	516.46	516.46		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		BstE	Mill	BStW	FCS
From	BstE	0.000	24.000	251.000	312.000
	Mill	16.000	0.000	25.000	18.000
	BStW	0.000	0.000	0.000	0.000
	FCS	552.000	86.000	48.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		BstE	Mill	BStW	FCS
From	BstE	0.00	0.04	0.43	0.53
	Mill	0.27	0.00	0.42	0.31
	BStW	0.25	0.25	0.25	0.25
	FCS	0.80	0.13	0.07	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		BstE	Mill	BStW	FCS
From	BstE	1.000	1.000	1.000	1.000
	Mill	1.000	1.000	1.000	1.000
	BStW	1.000	1.000	1.000	1.000
	FCS	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		BstE	Mill	BStW	FCS
From	BstE	0.0	0.0	0.0	0.0
	Mill	0.0	0.0	0.0	0.0
	BStW	0.0	0.0	0.0	0.0
	FCS	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
BstE	0.89	41.19	6.90	27.00	E
Mill	0.21	14.87	0.26	−1	B
BStW	0.00	0.00	0.00	−1	A
FCS	1.06	153.60	33.68	80.00	F

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	441.92	436.29	98.99	0.00	745.95	0.592	1.41	11.431	B
Mill	44.42	43.95	453.91	0.00	417.32	0.106	0.12	9.630	A
BStW	0.00	0.00	257.22	0.00	533.28	0.000	0.00	0.000	A
FCS	516.46	506.75	11.92	0.00	715.57	0.722	2.43	16.555	C

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	527.70	523.75	118.35	0.00	735.09	0.718	2.40	16.712	C
Mill	53.04	52.85	544.73	0.00	370.09	0.143	0.16	11.340	B
BStW	0.00	0.00	308.84	0.00	506.11	0.000	0.00	0.000	A
FCS	616.70	605.88	14.33	0.00	714.29	0.863	5.13	30.397	D

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	646.30	631.48	135.03	0.00	725.73	0.891	6.10	33.744	D
Mill	64.96	64.59	654.03	0.00	313.24	0.207	0.26	14.456	B
BStW	0.00	0.00	372.87	0.00	472.41	0.000	0.00	0.000	A
FCS	755.30	691.27	17.52	0.00	712.60	1.060	21.14	84.765	F

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	646.30	643.09	137.74	0.00	724.21	0.892	6.90	41.191	E
Mill	64.96	64.93	666.13	0.00	306.95	0.212	0.26	14.874	B
BStW	0.00	0.00	379.23	0.00	469.06	0.000	0.00	0.000	A
FCS	755.30	705.14	17.61	0.00	712.56	1.060	33.68	153.604	F

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	527.70	543.90	135.49	0.00	725.47	0.727	2.85	21.313	C
Mill	53.04	53.39	570.20	0.00	356.85	0.149	0.18	11.876	B
BStW	0.00	0.00	319.86	0.00	500.31	0.000	0.00	0.000	A
FCS	616.70	693.62	14.48	0.00	714.22	0.863	14.45	130.704	F

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	441.92	447.22	109.98	0.00	739.79	0.597	1.53	12.516	B
Mill	44.42	44.64	468.33	0.00	409.82	0.108	0.12	9.863	A
BStW	0.00	0.00	263.43	0.00	530.02	0.000	0.00	0.000	A
FCS	516.46	563.02	12.10	0.00	715.47	0.722	2.81	29.450	D

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	1.41	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
Mill	0.12	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	2.43	0.00	1.00	3.00	4.00			N/A	N/A

Queue Variation results: (08:00-08:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	2.40	0.00	0.00	5.00	7.00			N/A	N/A
Mill	0.16	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	5.13	0.00	2.00	12.00	16.00			N/A	N/A

Queue Variation results: (08:15-08:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	6.10	0.00	0.00	14.00	23.00			N/A	N/A
Mill	0.26	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	21.14	2.00	16.00	41.00	51.00			N/A	N/A

Queue Variation results: (08:30-08:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	6.90	0.00	0.00	13.00	27.00			N/A	N/A
Mill	0.26	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	33.68	5.00	27.00	65.00	80.00			N/A	N/A

Queue Variation results: (08:45-09:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	2.85	0.00	0.00	6.00	10.00			N/A	N/A
Mill	0.18	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	14.45	0.00	8.00	34.00	46.00			N/A	N/A

Queue Variation results: (09:00-09:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	1.53	0.00	0.00	2.00	5.00			N/A	N/A
Mill	0.12	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	2.81	0.00	0.00	3.00	9.00			N/A	N/A

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, PM	2023 Base + Dev	PM		ONE HOUR	16:00	17:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	Asda Link/ B5110 Bridge Street Rbout	Mini-roundabout	BstE,Mill,BStW,FCS	266.50	F

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
BstE	BstE	Bridge Street E	
Mill	Mill	Mill Street	
BStW	BStW	Bridge Street W	
FCS	FCS	Ffordd Cae Sel	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
BstE	0.00	99999.00
Mill	0.00	99999.00
BStW	0.00	99999.00
FCS	0.00	99999.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
BstE	3.56	3.56	5.00	2.00	14.81	11.23	0.00	
Mill	3.02	3.00	3.00	0.00	15.73	12.84	0.00	
BStW	3.00	3.00	3.00	0.00	15.23	13.50	0.00	
FCS	2.81	2.81	3.83	2.08	14.90	12.79	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
BstE		(calculated)	(calculated)	0.561	801.481
Mill		(calculated)	(calculated)	0.520	653.393
BStW		(calculated)	(calculated)	0.526	668.676
FCS		(calculated)	(calculated)	0.530	721.890

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
BstE	ONE HOUR	✓	763.00	100.000
Mill	ONE HOUR	✓	224.00	100.000
BStW	ONE HOUR	✓	0.00	100.000
FCS	ONE HOUR	✓	671.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowinPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:00-16:15	BstE	574.43	574.43		
16:00-16:15	Mill	168.64	168.64		
16:00-16:15	BStW	0.00	0.00		
16:00-16:15	FCS	505.16	505.16		
16:15-16:30	BstE	685.92	685.92		
16:15-16:30	Mill	201.37	201.37		
16:15-16:30	BStW	0.00	0.00		
16:15-16:30	FCS	603.22	603.22		
16:30-16:45	BstE	840.08	840.08		
16:30-16:45	Mill	246.63	246.63		
16:30-16:45	BStW	0.00	0.00		
16:30-16:45	FCS	738.78	738.78		
16:45-17:00	BstE	840.08	840.08		
16:45-17:00	Mill	246.63	246.63		
16:45-17:00	BStW	0.00	0.00		
16:45-17:00	FCS	738.78	738.78		
17:00-17:15	BstE	685.92	685.92		
17:00-17:15	Mill	201.37	201.37		
17:00-17:15	BStW	0.00	0.00		
17:00-17:15	FCS	603.22	603.22		
17:15-17:30	BstE	574.43	574.43		
17:15-17:30	Mill	168.64	168.64		
17:15-17:30	BStW	0.00	0.00		
17:15-17:30	FCS	505.16	505.16		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		BstE	Mill	BStW	FCS
From	BstE	0.000	25.000	276.000	462.000
	Mill	45.000	0.000	106.000	73.000
	BStW	0.000	0.000	0.000	0.000
	FCS	506.000	57.000	108.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		BstE	Mill	BStW	FCS
From	BstE	0.00	0.03	0.36	0.61
	Mill	0.20	0.00	0.47	0.33
	BStW	0.25	0.25	0.25	0.25
	FCS	0.75	0.08	0.16	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		BstE	Mill	BStW	FCS
From	BstE	1.000	1.000	1.000	1.000
	Mill	1.000	1.000	1.000	1.000
	BStW	1.000	1.000	1.000	1.000
	FCS	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		BstE	Mill	BStW	FCS
From	BstE	0.0	0.0	0.0	0.0
	Mill	0.0	0.0	0.0	0.0
	BStW	0.0	0.0	0.0	0.0
	FCS	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
BstE	1.19	389.78	77.67	131.00	F
Mill	1.02	185.46	12.25	37.00	F
BStW	0.00	0.00	0.00	−1	A
FCS	1.06	153.36	32.85	79.00	F

Main Results for each time segment

Main results: (16:00-16:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	574.43	561.35	121.88	0.00	733.11	0.784	3.27	19.697	C
Mill	168.64	164.64	622.74	0.00	329.52	0.512	1.00	21.362	C
BStW	0.00	0.00	426.63	0.00	444.11	0.000	0.00	0.000	A
FCS	505.16	495.66	33.08	0.00	704.36	0.717	2.38	16.579	C

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	685.92	660.96	145.72	0.00	719.73	0.953	9.51	47.547	E
Mill	201.37	195.65	734.68	0.00	271.30	0.742	2.43	44.556	E
BStW	0.00	0.00	503.28	0.00	403.77	0.000	0.00	0.000	A
FCS	603.22	592.61	39.30	0.00	701.06	0.860	5.03	30.440	D

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	840.08	702.26	166.36	0.00	708.16	1.186	43.96	152.345	F
Mill	246.63	223.17	788.14	0.00	243.50	1.013	8.29	114.673	F
BStW	0.00	0.00	542.79	0.00	382.97	0.000	0.00	0.000	A
FCS	738.78	676.52	44.83	0.00	698.13	1.058	20.59	84.692	F

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	840.08	705.27	169.61	0.00	706.33	1.189	77.67	321.324	F
Mill	246.63	230.80	793.18	0.00	240.87	1.024	12.25	185.459	F
BStW	0.00	0.00	548.63	0.00	379.89	0.000	0.00	0.000	A
FCS	738.78	689.77	46.37	0.00	697.31	1.059	32.85	153.365	F

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	685.92	699.04	166.56	0.00	708.04	0.969	74.39	389.784	F
Mill	201.37	224.56	785.16	0.00	245.05	0.822	6.45	156.607	F
BStW	0.00	0.00	541.57	0.00	383.61	0.000	0.00	0.000	A
FCS	603.22	677.36	45.11	0.00	697.98	0.864	14.31	131.144	F

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
BstE	574.43	715.81	135.57	0.00	725.43	0.792	39.04	288.184	F
Mill	168.64	184.56	781.09	0.00	247.16	0.682	2.47	65.560	F
BStW	0.00	0.00	530.65	0.00	389.36	0.000	0.00	0.000	A
FCS	505.16	551.31	37.08	0.00	702.24	0.719	2.77	29.748	D

Queue Variation Results for each time segment

Queue Variation results: (16:00-16:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	3.27	0.00	0.00	7.00	11.00			N/A	N/A
Mill	1.00	0.00	0.00	1.00	1.00			N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	2.38	0.00	1.00	3.00	4.00			N/A	N/A

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	9.51	0.00	5.00	22.00	30.00			N/A	N/A
Mill	2.43	0.00	1.00	5.00	7.00			N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	5.03	0.00	2.00	11.00	16.00			N/A	N/A

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	43.96	17.00	40.00	69.00	79.00			N/A	N/A
Mill	8.29	0.00	5.00	18.00	23.00			N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	20.59	2.00	16.00	40.00	50.00			N/A	N/A

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	77.67	38.00	73.00	113.00	127.00			N/A	N/A
Mill	12.25	0.00	7.00	28.00	37.00			N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	32.85	4.00	26.00	64.00	79.00			N/A	N/A

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	74.39	31.00	69.00	115.00	131.00			N/A	N/A
Mill	6.45	0.00	1.00	16.00	24.00			N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	14.31	0.00	8.00	34.00	45.00			N/A	N/A

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
BstE	39.04	9.00	33.00	70.00	83.00			N/A	N/A
Mill	2.47	0.00	0.00	4.00	9.00			N/A	N/A
BStW	0.00	−1	−1	−1	−1			N/A	N/A
FCS	2.77	0.00	0.00	3.00	9.00			N/A	N/A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A55J6_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A55 J6\2018 DF
Report generation date: 05/06/2018 14:50:00

« (Default Analysis Set) - 2017 Base, AM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Direct/Resultant Flows
» Turning Proportions
» Vehicle Mix
» Results
» Lane Results

Summary of junction performance

	AM				
	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS
	A1 [Entry Lane Simulation] - 2017 Base				
Junction 1 - Arm A5N	0.17	0.90	1.44	N/A	A
Junction 1 - Arm WBOFF	4.92	16.71	25.52	N/A	D
Junction 1 - Arm A5S	2.39	8.60	21.98	N/A	C
Junction 2 - Arm A5114	2.23	7.07	11.62	N/A	B
Junction 2 - Arm A5S	1.91	7.96	7.00	N/A	A
Junction 2 - Arm EBOFF	2.93	10.36	31.50	N/A	D
Junction 2 - Arm A5N	19.78	51.68	110.02	N/A	F

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:15 - 17:45
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:15 - 17:45
"D7 - 2023 Base + Dev + Seasonality, AM Aug" model duration: 10:45 - 12:15
"D8 - 2023 Base + Dev + Seasonality, PM Aug" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 05/06/2018 14:49:57

File summary

Title	(untitled)
Location	
Site Number	
Date	27/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	RogersA2
Description	

Analysis Options

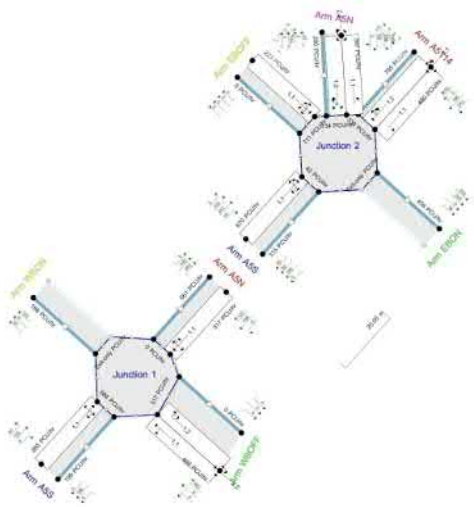
Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Entry Lane Analysis Options

Stop Criteria (%)	Random Seed	Results Refresh Speed (s)	Individual Vehicle Animation Number Of Trials	Time Step Size (s)	Last Run Random Seed	Last Run Number Of Trials
5.00	-1	3	1	10	2114213742	2617



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	Entry Lane Simulation		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base, AM	2017 Base	AM		Varies by Arm	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	1	A55 J6 WB	Roundabout	A5N,WBOFF,A5S,WBON			17.32	C
2	2	A55 J6 EB	Roundabout	A5114,EBON,A5S,EBOFF,A5N			34.58	D

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description
1	A5N	A5N	(untitled)	
1	WBOFF	WBOFF	(untitled)	
1	A5S	A5S	(untitled)	
1	WBON	WBON	(untitled)	
2	A5114	A5114	(untitled)	
2	EBON	EBON	(untitled)	
2	A5S	A5S	(untitled)	
2	EBOFF	EBOFF	(untitled)	
2	A5N	A5N	(untitled)	

Capacity Options

Junction	Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	A5N	0.00	99999.00
1	WBOFF	0.00	99999.00
1	A5S	0.00	99999.00
1	WBON	0.00	99999.00
2	A5114	0.00	99999.00
2	EBON	0.00	99999.00
2	A5S	0.00	99999.00
2	EBOFF	0.00	99999.00
2	A5N	0.00	99999.00

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	A5N	3.50	6.40	4.90	19.50	47.00	34.00	
1	WBOFF	5.10	8.10	17.00	27.00	47.00	43.00	
1	A5S	3.00	4.00	6.00	18.00	47.00	27.00	
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	A5114	4.30	8.60	5.00	20.00	48.00	48.00	
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	A5S	3.50	6.40	4.90	18.00	48.00	27.00	
2	EBOFF	3.40	6.50	1.00	30.50	48.00	39.00	
2	A5N	5.00	10.00	0.10	21.00	48.00	37.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	A5N		(calculated)	(calculated)	0.547	1343.496
1	WBOFF		(calculated)	(calculated)	0.680	2057.281
1	A5S		(calculated)	(calculated)	0.509	1112.116
1	WBON		(calculated)	(calculated)	Exit-only	Exit-only
2	A5114		(calculated)	(calculated)	0.569	1547.086
2	EBON		(calculated)	(calculated)	Exit-only	Exit-only
2	A5S		(calculated)	(calculated)	0.555	1370.930
2	EBOFF		(calculated)	(calculated)	0.498	1100.148
2	A5N		(calculated)	(calculated)	0.570	1490.932

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Junction	Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
1	A5N	None			
1	WBOFF	Percentage			92.00
1	A5S	Percentage			80.00
1	WBON	None			
2	A5114	Percentage			92.00
2	EBON	None			
2	A5S	None			
2	EBOFF	Percentage			75.00
2	A5N	Percentage			97.00

Entry Lane Analysis: Arm options

Junction	Arm	Lane Capacity Source	Traffic Considering Secondary Lanes (%)
1	A5N	Evenly split	10.00
1	WBOFF	Evenly split	10.00
1	A5S	Evenly split	10.00
1	WBON	Evenly split	10.00
2	A5114	Evenly split	10.00
2	EBON	Evenly split	10.00
2	A5S	Evenly split	10.00
2	EBOFF	Evenly split	10.00
2	A5N	Evenly split	10.00

Lanes

Junction	Arm	Lane Level	Lane	Has Limited Storage	Storage (PCU)	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	A5N	1	1		Infinity	0.00	99999.00
1	WBOFF	1	1	✓	7.00	0.00	99999.00
1	WBOFF	1	2	✓	7.00	0.00	99999.00
1	WBOFF	2	2		Infinity		
1	A5S	1	1		Infinity	0.00	99999.00
1	WBON	1	1		Infinity	0.00	99999.00
2	A5114	1	1	✓	9.00	0.00	99999.00
2	A5114	1	2	✓	9.00	0.00	99999.00
2	A5114	2	1		Infinity		
2	EBON	1	1		Infinity	0.00	99999.00
2	A5S	1	1		Infinity	0.00	99999.00
2	EBOFF	1	1		Infinity	0.00	99999.00
2	A5N	1	1	✓	8.00	0.00	99999.00
2	A5N	1	2	✓	8.00	0.00	99999.00
2	A5N	2	2		Infinity		

Entry Lane slope and intercept

Junction	Arm	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	A5N	(calculated)	(calculated)	0.547	1343.496
1	WBOFF	(calculated)	(calculated)	0.340	1028.641
1	WBOFF	(calculated)	(calculated)	0.340	1028.641
1	A5S	(calculated)	(calculated)	0.509	1112.116
1	WBON	(calculated)	(calculated)	Exit-only	Exit-only
2	A5114	(calculated)	(calculated)	0.285	773.543
2	A5114	(calculated)	(calculated)	0.285	773.543
2	EBON	(calculated)	(calculated)	Exit-only	Exit-only
2	A5S	(calculated)	(calculated)	0.555	1370.930
2	EBOFF	(calculated)	(calculated)	0.498	1100.148
2	A5N	(calculated)	(calculated)	0.285	745.466
2	A5N	(calculated)	(calculated)	0.285	745.466

Lane Movements

Junction	Arm	Lane Level	Lane	Arm			
				A5N	WBOFF	A5S	WBON
1	A5N	1	1	✓	✓	✓	✓
1	WBOFF	1	1			✓	✓
1	WBOFF	1	2	✓	✓		
1	WBOFF	2	2	✓	✓	✓	✓
1	A5S	1	1	✓	✓	✓	✓
1	WBON	1	1	✓	✓	✓	✓

Lane Movements

Junction	Arm	Lane Level	Lane	Arm				
				A5114	EBON	A5S	EBOFF	A5N
2	A5114	1	1		✓			
2	A5114	1	2	✓		✓	✓	✓
2	A5114	2	1	✓	✓	✓	✓	✓
2	EBON	1	1	✓	✓	✓	✓	✓
2	A5S	1	1	✓	✓	✓	✓	✓
2	EBOFF	1	1	✓	✓	✓	✓	✓
2	A5N	1	1	✓				
2	A5N	1	2		✓	✓	✓	✓
2	A5N	2	2	✓	✓	✓	✓	✓

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	A5N	ONE HOUR	✓	426.00	100.000
1	WBOFF	ONE HOUR	✓	620.00	100.000
1	A5S	ONE HOUR	✓	352.00	100.000
1	WBON	Exit-only	✓	Exit-only	Exit-only
2	A5114	ONE HOUR	✓	637.00	100.000
2	EBON	Exit-only	✓	Exit-only	Exit-only
2	A5S	ONE HOUR	✓	882.00	100.000
2	EBOFF	ONE HOUR	✓	298.00	100.000
2	A5N	ONE HOUR	✓	530.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Junction	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	1	A5N	320.72	320.72		
07:45-08:00	1	WBOFF	466.77	466.77		
07:45-08:00	1	A5S	265.00	265.00		
07:45-08:00	1	WBON	Exit-only	0.00		

08:00-08:15	1	A5N	382.97	382.97		
08:00-08:15	1	WBOFF	557.37	557.37		
08:00-08:15	1	A5S	316.44	316.44		
08:00-08:15	1	WBON	Exit-only	0.00		
08:15-08:30	1	A5N	469.03	469.03		
08:15-08:30	1	WBOFF	682.63	682.63		
08:15-08:30	1	A5S	387.56	387.56		
08:15-08:30	1	WBON	Exit-only	0.00		
08:30-08:45	1	A5N	469.03	469.03		
08:30-08:45	1	WBOFF	682.63	682.63		
08:30-08:45	1	A5S	387.56	387.56		
08:30-08:45	1	WBON	Exit-only	0.00		
08:45-09:00	1	A5N	382.97	382.97		
08:45-09:00	1	WBOFF	557.37	557.37		
08:45-09:00	1	A5S	316.44	316.44		
08:45-09:00	1	WBON	Exit-only	0.00		
09:00-09:15	1	A5N	320.72	320.72		
09:00-09:15	1	WBOFF	466.77	466.77		
09:00-09:15	1	A5S	265.00	265.00		
09:00-09:15	1	WBON	Exit-only	0.00		
07:45-08:00	2	A5114	479.57	479.57		
07:45-08:00	2	EBON	Exit-only	0.00		
07:45-08:00	2	A5S	664.02	664.02		
07:45-08:00	2	EBOFF	224.35	224.35		
07:45-08:00	2	A5N	399.01	399.01		
08:00-08:15	2	A5114	572.65	572.65		
08:00-08:15	2	EBON	Exit-only	0.00		
08:00-08:15	2	A5S	792.90	792.90		
08:00-08:15	2	EBOFF	267.90	267.90		

08:00-08:15	2	A5N	476.46	476.46		
08:15-08:30	2	A5114	701.35	701.35		
08:15-08:30	2	EBON	Exit-only	0.00		
08:15-08:30	2	A5S	971.10	971.10		
08:15-08:30	2	EBOFF	328.10	328.10		
08:15-08:30	2	A5N	583.54	583.54		
08:30-08:45	2	A5114	701.35	701.35		
08:30-08:45	2	EBON	Exit-only	0.00		
08:30-08:45	2	A5S	971.10	971.10		
08:30-08:45	2	EBOFF	328.10	328.10		
08:30-08:45	2	A5N	583.54	583.54		
08:45-09:00	2	A5114	572.65	572.65		
08:45-09:00	2	EBON	Exit-only	0.00		
08:45-09:00	2	A5S	792.90	792.90		
08:45-09:00	2	EBOFF	267.90	267.90		
08:45-09:00	2	A5N	476.46	476.46		
09:00-09:15	2	A5114	479.57	479.57		
09:00-09:15	2	EBON	Exit-only	0.00		
09:00-09:15	2	A5S	664.02	664.02		
09:00-09:15	2	EBOFF	224.35	224.35		
09:00-09:15	2	A5N	399.01	399.01		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.000	0.000	260.000	166.000
	WBOFF	615.000	0.000	5.000	0.000
	A5S	266.000	0.000	0.000	86.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.00	0.00	0.61	0.39
	WBOFF	0.99	0.00	0.01	0.00
	A5S	0.76	0.00	0.00	0.24
	WBON	0.25	0.25	0.25	0.25

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Counts / Proportions (PCU/hr) - Junction 2 (for whole period)

		To				
		A5114	EBON	A5S	EBOFF	A5N
From	A5114	0.000	320.000	259.000	0.000	58.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	651.000	23.000	0.000	0.000	208.000
	EBOFF	254.000	0.000	38.000	0.000	6.000
	A5N	141.000	267.000	122.000	0.000	0.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 2 (for whole period)

		To				
		A5114	EBON	A5S	EBOFF	A5N
From	A5114	0.00	0.50	0.41	0.00	0.09
	EBON	0.20	0.20	0.20	0.20	0.20
	A5S	0.74	0.03	0.00	0.00	0.24
	EBOFF	0.85	0.00	0.13	0.00	0.02
	A5N	0.27	0.50	0.23	0.00	0.00

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	1.000	1.000	1.000	1.000
	WBOFF	1.000	1.000	1.000	1.000
	A5S	1.000	1.000	1.000	1.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.0	0.0	0.0	0.0
	WBOFF	0.0	0.0	0.0	0.0
	A5S	0.0	0.0	0.0	0.0
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Average PCU Per Vehicle - Junction 2 (for whole period)

		To				
		A5114	EBON	A5S	EBOFF	A5N
From	A5114	1.000	1.000	1.000	1.000	1.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	1.000	1.000	1.000	1.000	1.000
	EBOFF	1.000	1.000	1.000	1.000	1.000
	A5N	1.000	1.000	1.000	1.000	1.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 2 (for whole period)

		To				
		A5114	EBON	A5S	EBOFF	A5N
From	A5114	0.0	0.0	0.0	0.0	0.0
	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	0.0	0.0	0.0	0.0	0.0
	EBOFF	0.0	0.0	0.0	0.0	0.0
	A5N	0.0	0.0	0.0	0.0	0.0

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Junction	Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)
1	A5N	1.44	0.17	0.90	A	389.56	584.34	11.52	1.18	0.13
1	WBOFF	25.52	4.92	16.71	D	569.67	854.51	209.32	14.70	2.33
1	A5S	21.98	2.39	8.60	C	323.71	485.56	105.98	13.10	1.18
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	11.62	2.23	7.07	B	582.05	873.07	127.60	8.77	1.42
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	7.00	1.91	7.96	A	810.47	1215.71	94.16	4.65	1.05
2	EBOFF	31.50	2.93	10.36	D	274.70	412.06	123.82	18.03	1.38
2	A5N	110.02	19.78	51.68	F	484.54	726.80	615.51	50.81	6.84

Main Results for each time segment

Main results: (07:45-08:00)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	318.04	79.51	317.49	660.66	0.00	0.00	0.09	0.908	A
1	WBOFF	466.36	116.59	466.43	0.00	317.49	0.00	0.75	5.787	A
1	A5S	267.17	66.79	265.36	199.26	583.77	0.00	0.43	5.629	A
1	WBON	Exit-only	Exit-only	Exit-only	188.46	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	480.34	120.09	480.34	794.70	338.20	0.00	0.80	5.601	A
2	EBON	Exit-only	Exit-only	Exit-only	459.16	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	668.12	167.03	669.70	314.72	41.52	0.00	0.45	2.436	A
2	EBOFF	224.34	56.09	222.76	0.00	711.22	0.00	0.47	6.942	A
2	A5N	397.00	99.25	396.96	200.22	733.76	0.00	1.15	9.983	A

Main results: (08:00-08:15)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	378.34	94.59	378.94	797.54	0.00	0.00	0.11	1.099	A
1	WBOFF	561.12	140.28	561.00	0.00	378.94	0.00	1.55	9.570	A
1	A5S	322.49	80.62	319.90	237.94	699.18	0.00	0.90	9.233	A
1	WBON	Exit-only	Exit-only	Exit-only	221.54	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	568.75	142.19	568.64	947.60	409.09	0.00	1.21	7.498	A
2	EBON	Exit-only	Exit-only	Exit-only	544.52	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	800.59	200.15	801.28	380.63	53.03	0.00	0.79	3.664	A
2	EBOFF	270.15	67.54	268.93	0.00	854.31	0.00	0.90	11.580	B
2	A5N	476.52	119.13	474.04	245.53	877.71	0.00	2.56	17.811	C

Main results: (08:15-08:30)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	460.86	115.21	461.64	968.96	0.00	0.11	0.17	1.435	A
1	WBOFF	683.36	170.84	683.48	0.00	461.64	1.55	4.92	22.509	C
1	A5S	388.82	97.20	387.58	288.70	855.09	0.90	2.39	19.401	C
1	WBON	Exit-only	Exit-only	Exit-only	273.70	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	702.35	175.59	703.33	1141.05	476.15	1.21	2.22	11.299	B
2	EBON	Exit-only	Exit-only	Exit-only	661.31	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	970.55	242.64	970.20	453.57	64.47	0.79	1.84	6.747	A
2	EBOFF	330.45	82.61	329.16	0.00	1034.67	0.90	2.93	28.347	D
2	A5N	583.31	145.83	558.32	301.19	1062.64	2.56	13.41	60.832	F

Main results: (08:30-08:45)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	470.07	117.52	470.71	966.97	0.00	0.17	0.17	1.422	A
1	WBOFF	676.67	169.17	675.54	0.00	470.71	4.92	4.85	25.522	D
1	A5S	387.21	96.80	387.42	292.82	856.16	2.39	2.33	21.985	C
1	WBON	Exit-only	Exit-only	Exit-only	276.61	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	696.09	174.02	695.31	1143.67	476.42	2.22	2.23	11.617	B
2	EBON	Exit-only	Exit-only	Exit-only	660.64	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	970.39	242.60	968.28	453.13	63.81	1.84	1.91	6.999	A
2	EBOFF	327.63	81.91	331.59	0.00	1032.08	2.93	2.81	31.500	D
2	A5N	579.98	145.00	564.88	302.34	1061.34	13.41	19.78	110.024	F

Main results: (08:45-09:00)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	388.09	97.02	387.40	788.16	0.00	0.17	0.12	1.114	A
1	WBOFF	562.74	140.69	560.77	0.00	387.40	4.85	1.55	11.707	B
1	A5S	314.35	78.59	315.77	240.71	701.50	2.33	0.84	10.600	B
1	WBON	Exit-only	Exit-only	Exit-only	229.11	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	564.14	141.04	564.10	933.89	424.38	2.23	1.16	8.303	A
2	EBON	Exit-only	Exit-only	Exit-only	557.61	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	784.45	196.11	786.21	383.52	52.14	1.91	0.79	3.855	A
2	EBOFF	270.06	67.51	266.23	0.00	838.35	2.81	0.91	14.091	B
2	A5N	474.64	118.66	491.90	245.07	859.51	19.78	4.88	63.557	F

Main results: (09:00-09:15)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	321.94	80.49	322.12	667.04	0.00	0.12	0.08	0.890	A
1	WBOFF	467.78	116.94	467.83	0.00	322.12	1.55	0.76	6.166	A
1	A5S	262.19	65.55	265.47	201.51	592.07	0.84	0.41	5.983	A
1	WBON	Exit-only	Exit-only	Exit-only	190.50	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	480.62	120.15	480.66	789.97	341.29	1.16	0.81	5.812	A
2	EBON	Exit-only	Exit-only	Exit-only	463.08	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	668.74	167.18	665.69	313.11	43.52	0.79	0.51	2.499	A
2	EBOFF	225.60	56.40	223.52	0.00	709.20	0.91	0.45	7.290	A
2	A5N	395.77	98.94	396.50	204.74	727.98	4.88	1.14	13.500	B

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1.21	0.08	0.908	A	A
1	WBOFF	11.17	0.74	5.787	A	A
1	A5S	6.14	0.41	5.629	A	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	11.12	0.74	5.601	A	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	6.74	0.45	2.436	A	A
2	EBOFF	6.44	0.43	6.942	A	A
2	A5N	16.35	1.09	9.983	A	A

Queueing Delay results: (08:00-08:15)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1.75	0.12	1.099	A	A
1	WBOFF	22.04	1.47	9.570	A	A
1	A5S	12.11	0.81	9.233	A	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	17.88	1.19	7.498	A	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	12.07	0.80	3.664	A	A
2	EBOFF	12.79	0.85	11.580	B	B
2	A5N	34.67	2.31	17.811	C	B

Queueing Delay results: (08:15-08:30)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	2.80	0.19	1.435	A	A
1	WBOFF	62.33	4.16	22.509	C	C
1	A5S	30.64	2.04	19.401	C	B
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	32.79	2.19	11.299	B	B
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	27.12	1.81	6.747	A	A
2	EBOFF	37.37	2.49	28.347	D	C
2	A5N	131.31	8.75	60.832	F	E

Queueing Delay results: (08:30-08:45)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	2.78	0.19	1.422	A	A
1	WBOFF	72.49	4.83	25.522	D	C
1	A5S	35.63	2.38	21.985	C	C
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	33.85	2.26	11.617	B	B
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	28.29	1.89	6.999	A	A
2	EBOFF	43.07	2.87	31.500	D	C
2	A5N	251.41	16.76	110.024	F	F

Queueing Delay results: (08:45-09:00)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1.78	0.12	1.114	A	A
1	WBOFF	28.94	1.93	11.707	B	B
1	A5S	14.66	0.98	10.600	B	B
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	20.04	1.34	8.303	A	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	12.90	0.86	3.855	A	A
2	EBOFF	17.08	1.14	14.091	B	B
2	A5N	155.05	10.34	63.557	F	E

Queueing Delay results: (09:00-09:15)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1.20	0.08	0.890	A	A
1	WBOFF	12.37	0.82	6.166	A	A
1	A5S	6.80	0.45	5.983	A	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	11.92	0.79	5.812	A	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	7.03	0.47	2.499	A	A
2	EBOFF	7.08	0.47	7.290	A	A
2	A5N	26.72	1.78	13.500	B	B

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.09	0.00	0.00	0.00	0.29
1	WBOFF	0.75	0.00	0.00	2.22	3.21
1	A5S	0.43	0.00	0.00	1.16	1.88
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	0.80	0.00	0.00	1.97	2.86
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.45	0.00	0.00	1.34	2.37
2	EBOFF	0.47	0.00	0.00	1.30	2.04
2	A5N	1.15	0.00	0.00	2.85	4.14

Queue Variation results: (08:00-08:15)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.11	0.00	0.00	0.00	0.55
1	WBOFF	1.55	0.00	0.00	4.25	5.96
1	A5S	0.90	0.00	0.00	2.50	3.69
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1.21	0.00	0.13	2.88	3.99
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.79	0.00	0.00	2.40	3.70
2	EBOFF	0.90	0.00	0.00	2.46	3.58
2	A5N	2.56	0.00	0.92	6.12	8.63

Queue Variation results: (08:15-08:30)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.17	0.00	0.00	0.05	0.90
1	WBOFF	4.92	0.00	2.57	12.36	16.61
1	A5S	2.39	0.00	0.66	6.07	8.60
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	2.22	0.00	1.06	4.98	6.61
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1.84	0.00	0.00	5.05	7.24
2	EBOFF	2.93	0.00	1.08	7.47	10.36
2	A5N	13.41	0.00	9.81	29.36	35.89

Queue Variation results: (08:30-08:45)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.17	0.00	0.00	0.00	0.90
1	WBOFF	4.85	0.00	2.35	12.46	16.71
1	A5S	2.33	0.00	0.65	5.99	8.37
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	2.23	0.00	0.88	5.23	7.07
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1.91	0.00	0.00	5.48	7.96
2	EBOFF	2.81	0.00	1.03	6.87	9.83
2	A5N	19.78	0.18	15.18	42.87	51.68

Queue Variation results: (08:45-09:00)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.12	0.00	0.00	0.00	0.57
1	WBOFF	1.55	0.00	0.00	4.17	5.94
1	A5S	0.84	0.00	0.00	2.39	3.37
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1.16	0.00	0.00	2.84	4.10
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.79	0.00	0.00	2.44	3.79
2	EBOFF	0.91	0.00	0.00	2.46	3.74
2	A5N	4.88	0.00	1.53	12.36	21.48

Queue Variation results: (09:00-09:15)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.08	0.00	0.00	0.00	0.13
1	WBOFF	0.76	0.00	0.00	2.21	3.25
1	A5S	0.41	0.00	0.00	1.03	1.84
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	0.81	0.00	0.00	1.99	2.98
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.51	0.00	0.00	1.55	2.67
2	EBOFF	0.45	0.00	0.00	1.16	1.94
2	A5N	1.14	0.00	0.00	2.81	3.97

Lane Results

Lanes: Main Results for each time segment

Main results: (07:45-08:00)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	318.04	79.51	317.49	1343.50	0.237	0.00	0.09	0.908	A
1	WBOFF	1	1	3.67	0.92	3.67	847.00	0.004	0.00	0.00	1.017	A
1	WBOFF	1	2	462.76	115.69	461.86	847.00	0.546	0.00	0.75	5.742	A
1	WBOFF	2	2	466.36	116.59	466.43			0.00	0.01	0.083	A
1	A5S	1	1	267.17	66.79	265.36	652.13	0.410	0.00	0.43	5.629	A
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	242.20	60.55	240.78	623.08	0.389	0.00	0.40	5.633	A
2	A5114	1	2	238.14	59.54	236.42	623.08	0.382	0.00	0.40	5.567	A
2	A5114	2	1	480.34	120.09	480.34			0.00	0.00	0.000	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	668.12	167.03	669.70	1347.88	0.496	0.00	0.45	2.436	A
2	EBOFF	1	1	224.34	56.09	222.76	559.68	0.401	0.00	0.47	6.942	A
2	A5N	1	1	105.19	26.30	106.45	520.12	0.202	0.00	0.14	4.810	A
2	A5N	1	2	291.77	72.94	292.69	520.12	0.561	0.00	0.99	11.720	B
2	A5N	2	2	397.00	99.25	396.96			0.00	0.02	0.097	A

Main results: (08:00-08:15)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	378.34	94.59	378.94	1343.50	0.282	0.09	0.11	1.099	A
1	WBOFF	1	1	4.33	1.08	4.38	827.78	0.005	0.00	0.00	1.169	A
1	WBOFF	1	2	556.67	139.17	553.80	827.78	0.672	0.75	1.45	9.058	A
1	WBOFF	2	2	561.12	140.28	561.00			0.01	0.10	0.560	A
1	A5S	1	1	322.49	80.62	319.90	605.16	0.533	0.43	0.90	9.233	A
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	285.05	71.26	283.68	604.51	0.472	0.40	0.61	7.497	A
2	A5114	1	2	283.58	70.90	285.42	604.51	0.469	0.40	0.60	7.482	A
2	A5114	2	1	568.75	142.19	568.64			0.00	0.00	0.008	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	800.59	200.15	801.28	1341.49	0.597	0.45	0.79	3.664	A
2	EBOFF	1	1	270.15	67.54	268.93	506.28	0.534	0.47	0.90	11.580	B
2	A5N	1	1	125.07	31.27	126.10	480.30	0.260	0.14	0.22	6.433	A
2	A5N	1	2	348.97	87.24	352.87	480.30	0.727	0.99	2.07	20.219	C
2	A5N	2	2	476.52	119.13	474.04			0.02	0.26	1.190	A

Main results: (08:15-08:30)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	460.86	115.21	461.64	1343.50	0.343	0.11	0.17	1.435	A
1	WBOFF	1	1	5.18	1.30	5.27	801.90	0.006	0.00	0.00	1.342	A
1	WBOFF	1	2	678.30	169.57	676.87	801.90	0.846	1.45	3.40	16.718	C
1	WBOFF	2	2	683.36	170.84	683.48			0.10	1.52	5.794	A
1	A5S	1	1	388.82	97.20	387.58	541.71	0.718	0.90	2.39	19.401	C
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	353.76	88.44	357.80	586.94	0.603	0.61	1.12	11.242	B
2	A5114	1	2	349.57	87.39	345.40	586.94	0.596	0.60	1.08	11.057	B
2	A5114	2	1	702.35	175.59	703.33			0.00	0.01	0.147	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	970.55	242.64	970.20	1335.14	0.727	0.79	1.84	6.747	A
2	EBOFF	1	1	330.45	82.61	329.16	438.97	0.753	0.90	2.93	28.347	D
2	A5N	1	1	148.59	37.15	147.56	429.14	0.346	0.22	0.46	9.954	A
2	A5N	1	2	409.73	102.43	407.00	429.14	0.955	2.07	5.98	44.673	E
2	A5N	2	2	583.31	145.83	558.32			0.26	6.97	24.547	C

Main results: (08:30-08:45)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	470.07	117.52	470.71	1343.50	0.350	0.17	0.17	1.422	A
1	WBOFF	1	1	6.10	1.52	6.08	799.06	0.008	0.00	0.00	1.216	A
1	WBOFF	1	2	669.45	167.36	672.20	799.06	0.838	3.40	3.31	17.784	C
1	WBOFF	2	2	676.67	169.17	675.54			1.52	1.54	7.884	A
1	A5S	1	1	387.21	96.80	387.42	541.28	0.715	2.39	2.33	21.985	C
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	352.43	88.11	353.53	586.87	0.601	1.12	1.14	11.624	B
2	A5114	1	2	342.87	85.72	347.62	586.87	0.584	1.08	1.04	11.194	B
2	A5114	2	1	696.09	174.02	695.31			0.01	0.05	0.201	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	970.39	242.60	968.28	1335.51	0.727	1.84	1.91	6.999	A
2	EBOFF	1	1	327.63	81.91	331.59	439.94	0.745	2.93	2.81	31.500	D
2	A5N	1	1	150.13	37.53	149.09	429.50	0.350	0.46	0.48	11.243	B
2	A5N	1	2	414.75	103.69	409.66	429.50	0.966	5.98	6.56	54.693	F
2	A5N	2	2	579.98	145.00	564.88			6.97	12.74	66.896	F

Main results: (08:45-09:00)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	388.09	97.02	387.40	1343.50	0.289	0.17	0.12	1.114	A
1	WBOFF	1	1	4.63	1.16	4.68	825.13	0.006	0.00	0.00	1.092	A
1	WBOFF	1	2	556.14	139.04	550.13	825.13	0.674	3.31	1.44	10.345	B
1	WBOFF	2	2	562.74	140.69	560.77			1.54	0.11	1.643	A
1	A5S	1	1	314.35	78.59	315.77	604.22	0.520	2.33	0.84	10.600	B
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	284.64	71.16	284.46	600.50	0.474	1.14	0.63	8.299	A
2	A5114	1	2	279.46	69.86	284.43	600.50	0.465	1.04	0.53	8.251	A
2	A5114	2	1	564.14	141.04	564.10			0.05	0.00	0.038	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	784.45	196.11	786.21	1341.98	0.585	1.91	0.79	3.855	A
2	EBOFF	1	1	270.06	67.51	266.23	512.24	0.527	2.81	0.91	14.091	B
2	A5N	1	1	131.12	32.78	129.40	485.33	0.270	0.48	0.27	8.440	A
2	A5N	1	2	360.78	90.19	369.35	485.33	0.743	6.56	2.81	38.017	E
2	A5N	2	2	474.64	118.66	491.90			12.74	1.80	35.165	E

Main results: (09:00-09:15)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	321.94	80.49	322.12	1343.50	0.240	0.12	0.08	0.890	A
1	WBOFF	1	1	4.15	1.04	4.13	845.55	0.005	0.00	0.00	1.069	A
1	WBOFF	1	2	463.68	115.92	467.32	845.55	0.548	1.44	0.75	6.104	A
1	WBOFF	2	2	467.78	116.94	467.83			0.11	0.01	0.125	A
1	A5S	1	1	262.19	65.55	265.47	648.75	0.404	0.84	0.41	5.983	A
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	243.62	60.91	243.35	622.27	0.392	0.63	0.40	5.833	A
2	A5114	1	2	237.04	59.26	235.07	622.27	0.381	0.53	0.41	5.789	A
2	A5114	2	1	480.62	120.15	480.66			0.00	0.00	0.001	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	668.74	167.18	665.69	1346.77	0.497	0.79	0.51	2.499	A
2	EBOFF	1	1	225.60	56.40	223.52	560.44	0.403	0.91	0.45	7.290	A
2	A5N	1	1	105.72	26.43	106.63	521.72	0.203	0.27	0.14	5.089	A
2	A5N	1	2	290.78	72.70	296.65	521.72	0.557	2.81	0.98	14.733	B
2	A5N	2	2	395.77	98.94	396.50			1.80	0.02	1.931	A

Lanes: Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	1.21	0.08	0.908	A	A
1	WBOFF	1	1	0.02	0.00	1.017	A	A
1	WBOFF	1	2	10.99	0.73	5.742	A	A
1	WBOFF	2	2	0.16	0.01	0.083	A	A
1	A5S	1	1	6.14	0.41	5.629	A	A
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	5.61	0.37	5.633	A	A
2	A5114	1	2	5.51	0.37	5.567	A	A
2	A5114	2	1	0.00	0.00	0.000	A	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	6.74	0.45	2.436	A	A
2	EBOFF	1	1	6.44	0.43	6.942	A	A
2	A5N	1	1	2.12	0.14	4.810	A	A
2	A5N	1	2	14.08	0.94	11.720	B	B
2	A5N	2	2	0.16	0.01	0.097	A	A

Queueing Delay results: (08:00-08:15)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	1.75	0.12	1.099	A	A
1	WBOFF	1	1	0.02	0.00	1.169	A	A
1	WBOFF	1	2	20.73	1.38	9.058	A	A
1	WBOFF	2	2	1.29	0.09	0.560	A	A
1	A5S	1	1	12.11	0.81	9.233	A	A
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	8.96	0.60	7.497	A	A
2	A5114	1	2	8.90	0.59	7.482	A	A
2	A5114	2	1	0.02	0.00	0.008	A	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	12.07	0.80	3.664	A	A
2	EBOFF	1	1	12.79	0.85	11.580	B	B
2	A5N	1	1	3.39	0.23	6.433	A	A
2	A5N	1	2	29.02	1.93	20.219	C	C
2	A5N	2	2	2.27	0.15	1.190	A	A

Queueing Delay results: (08:15-08:30)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	2.80	0.19	1.435	A	A
1	WBOFF	1	1	0.03	0.00	1.342	A	A
1	WBOFF	1	2	46.36	3.09	16.718	C	B
1	WBOFF	2	2	15.93	1.06	5.794	A	A
1	A5S	1	1	30.64	2.04	19.401	C	B
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	16.41	1.09	11.242	B	B
2	A5114	1	2	15.96	1.06	11.057	B	B
2	A5114	2	1	0.43	0.03	0.147	A	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	27.12	1.81	6.747	A	A
2	EBOFF	1	1	37.37	2.49	28.347	D	C
2	A5N	1	1	6.08	0.41	9.954	A	A
2	A5N	1	2	73.43	4.90	44.673	E	D
2	A5N	2	2	51.80	3.45	24.547	C	C

Queueing Delay results: (08:30-08:45)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	2.78	0.19	1.422	A	A
1	WBOFF	1	1	0.03	0.00	1.216	A	A
1	WBOFF	1	2	50.09	3.34	17.784	C	B
1	WBOFF	2	2	22.37	1.49	7.884	A	A
1	A5S	1	1	35.63	2.38	21.985	C	C
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	17.04	1.14	11.624	B	B
2	A5114	1	2	16.24	1.08	11.194	B	B
2	A5114	2	1	0.58	0.04	0.201	A	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	28.29	1.89	6.999	A	A
2	EBOFF	1	1	43.07	2.87	31.500	D	C
2	A5N	1	1	6.96	0.46	11.243	B	B
2	A5N	1	2	93.37	6.22	54.693	F	D
2	A5N	2	2	151.08	10.07	66.896	F	E

Queueing Delay results: (08:45-09:00)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	1.78	0.12	1.114	A	A
1	WBOFF	1	1	0.02	0.00	1.092	A	A
1	WBOFF	1	2	24.53	1.64	10.345	B	B
1	WBOFF	2	2	4.38	0.29	1.643	A	A
1	A5S	1	1	14.66	0.98	10.600	B	B
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	10.05	0.67	8.299	A	A
2	A5114	1	2	9.89	0.66	8.251	A	A
2	A5114	2	1	0.10	0.01	0.038	A	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	12.90	0.86	3.855	A	A
2	EBOFF	1	1	17.08	1.14	14.091	B	B
2	A5N	1	1	4.90	0.33	8.440	A	A
2	A5N	1	2	62.96	4.20	38.017	E	D
2	A5N	2	2	87.20	5.81	35.165	E	D

Queueing Delay results: (09:00-09:15)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	1.20	0.08	0.890	A	A
1	WBOFF	1	1	0.02	0.00	1.069	A	A
1	WBOFF	1	2	12.09	0.81	6.104	A	A
1	WBOFF	2	2	0.27	0.02	0.125	A	A
1	A5S	1	1	6.80	0.45	5.983	A	A
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	6.03	0.40	5.833	A	A
2	A5114	1	2	5.89	0.39	5.789	A	A
2	A5114	2	1	0.00	0.00	0.001	A	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	7.03	0.47	2.499	A	A
2	EBOFF	1	1	7.08	0.47	7.290	A	A
2	A5N	1	1	2.36	0.16	5.089	A	A
2	A5N	1	2	19.32	1.29	14.733	B	B
2	A5N	2	2	5.03	0.34	1.931	A	A

Lanes: Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.09	0.00	0.00	0.00	0.29
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	0.75	0.00	0.00	2.22	3.21
1	WBOFF	2	2	0.01	0.00	0.00	0.00	0.00
1	A5S	1	1	0.43	0.00	0.00	1.16	1.88
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	0.40	0.00	0.00	1.07	1.93
2	A5114	1	2	0.40	0.00	0.00	1.00	1.81
2	A5114	2	1	0.00	0.00	0.00	0.00	0.00
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.45	0.00	0.00	1.34	2.37
2	EBOFF	1	1	0.47	0.00	0.00	1.30	2.04
2	A5N	1	1	0.14	0.00	0.00	0.14	0.71
2	A5N	1	2	0.99	0.00	0.00	2.66	3.90
2	A5N	2	2	0.02	0.00	0.00	0.00	0.00

Queue Variation results: (08:00-08:15)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.11	0.00	0.00	0.00	0.55
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	1.45	0.00	0.00	4.25	5.96
1	WBOFF	2	2	0.10	0.00	0.00	0.00	0.00
1	A5S	1	1	0.90	0.00	0.00	2.50	3.69
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	0.61	0.00	0.00	1.67	2.50
2	A5114	1	2	0.60	0.00	0.00	1.68	2.56
2	A5114	2	1	0.00	0.00	0.00	0.00	0.00
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.79	0.00	0.00	2.40	3.70
2	EBOFF	1	1	0.90	0.00	0.00	2.46	3.58
2	A5N	1	1	0.22	0.00	0.00	0.54	0.97
2	A5N	1	2	2.07	0.00	0.63	5.77	8.00
2	A5N	2	2	0.26	0.00	0.00	0.00	0.42

Queue Variation results: (08:15-08:30)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.17	0.00	0.00	0.05	0.90
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	3.40	0.00	2.57	7.00	7.00
1	WBOFF	2	2	1.52	0.00	0.00	5.36	9.61
1	A5S	1	1	2.39	0.00	0.66	6.07	8.60
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	1.12	0.00	0.00	3.02	4.27
2	A5114	1	2	1.08	0.00	0.00	2.86	4.24
2	A5114	2	1	0.01	0.00	0.00	0.00	0.00
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	1.84	0.00	0.00	5.05	7.24
2	EBOFF	1	1	2.93	0.00	1.08	7.47	10.36
2	A5N	1	1	0.46	0.00	0.00	1.22	2.13
2	A5N	1	2	5.98	0.00	8.00	8.00	8.00
2	A5N	2	2	6.97	0.00	1.23	20.85	27.56

Queue Variation results: (08:30-08:45)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.17	0.00	0.00	0.00	0.90
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	3.31	0.00	2.35	7.00	7.00
1	WBOFF	2	2	1.54	0.00	0.00	5.46	9.71
1	A5S	1	1	2.33	0.00	0.65	5.99	8.37
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	1.14	0.00	0.00	3.07	4.52
2	A5114	1	2	1.04	0.00	0.00	2.88	4.13
2	A5114	2	1	0.05	0.00	0.00	0.00	0.00
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	1.91	0.00	0.00	5.48	7.96
2	EBOFF	1	1	2.81	0.00	1.03	6.87	9.83
2	A5N	1	1	0.48	0.00	0.00	1.34	2.15
2	A5N	1	2	6.56	0.00	8.00	8.00	8.00
2	A5N	2	2	12.74	0.00	6.70	34.42	43.31

Queue Variation results: (08:45-09:00)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.12	0.00	0.00	0.00	0.57
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	1.44	0.00	0.00	4.17	5.94
1	WBOFF	2	2	0.11	0.00	0.00	0.00	0.00
1	A5S	1	1	0.84	0.00	0.00	2.39	3.37
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	0.63	0.00	0.00	1.76	2.68
2	A5114	1	2	0.53	0.00	0.00	1.45	2.32
2	A5114	2	1	0.00	0.00	0.00	0.00	0.00
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.79	0.00	0.00	2.44	3.79
2	EBOFF	1	1	0.91	0.00	0.00	2.46	3.74
2	A5N	1	1	0.27	0.00	0.00	0.67	1.27
2	A5N	1	2	2.81	0.00	1.27	8.00	8.00
2	A5N	2	2	1.80	0.00	0.00	3.77	12.85

Queue Variation results: (09:00-09:15)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.08	0.00	0.00	0.00	0.13
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	0.75	0.00	0.00	2.20	3.23
1	WBOFF	2	2	0.01	0.00	0.00	0.00	0.00
1	A5S	1	1	0.41	0.00	0.00	1.03	1.84
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	0.40	0.00	0.00	1.00	1.84
2	A5114	1	2	0.41	0.00	0.00	1.10	1.88
2	A5114	2	1	0.00	0.00	0.00	0.00	0.00
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.51	0.00	0.00	1.55	2.67
2	EBOFF	1	1	0.45	0.00	0.00	1.16	1.94
2	A5N	1	1	0.14	0.00	0.00	0.12	0.72
2	A5N	1	2	0.98	0.00	0.00	2.58	3.77
2	A5N	2	2	0.02	0.00	0.00	0.00	0.00

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A55J6_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A55 J6\2018 DF
Report generation date: 05/06/2018 15:09:19

« (Default Analysis Set) - 2017 Base, PM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Direct/Resultant Flows
» Turning Proportions
» Vehicle Mix
» Results
» Lane Results

Summary of junction performance

	PM				
	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS
	A1 [Entry Lane Simulation] - 2017 Base				
Junction 1 - Arm A5N	0.26	1.62	1.64	N/A	A
Junction 1 - Arm WBOFF	4.47	15.37	25.78	N/A	D
Junction 1 - Arm A5S	2.07	7.40	21.90	N/A	C
Junction 2 - Arm A5114	18.23	56.12	56.58	N/A	F
Junction 2 - Arm A5S	0.85	3.00	3.39	N/A	A
Junction 2 - Arm EBOFF	0.83	3.41	13.42	N/A	B
Junction 2 - Arm A5N	0.68	2.70	7.44	N/A	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM" model duration: 07:45 - 09:15
"D2 - 2017 Base, PM " model duration: 16:15 - 17:45
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:15 - 17:45
"D7 - 2023 Base + Dev + Seasonality, AM Aug" model duration: 10:45 - 12:15
"D8 - 2023 Base + Dev + Seasonality, PM Aug" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 05/06/2018 15:09:16

File summary

Title	(untitled)
Location	
Site Number	
Date	27/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	RogersA2
Description	

Analysis Options

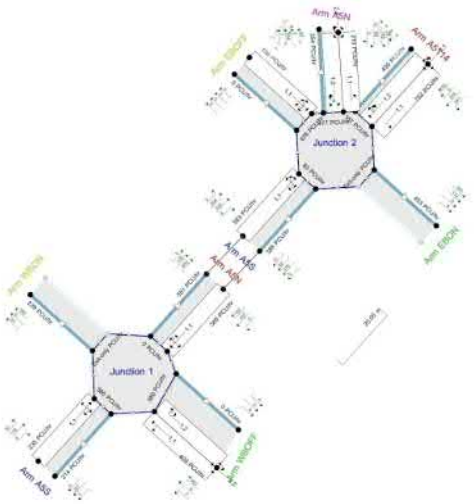
Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Entry Lane Analysis Options

Stop Criteria (%)	Random Seed	Results Refresh Speed (s)	Individual Vehicle Animation Number Of Trials	Time Step Size (s)	Last Run Random Seed	Last Run Number Of Trials
5.00	-1	3	1	10	868176509	1073



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction 1 - Arm A5N	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Warning	Linked Roundabout	Junction 2 - Arm A5S	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	Entry Lane Simulation		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base, PM	2017 Base	PM		Varies by Arm	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	1	A55 J6 WB	Roundabout	A5N,WBOFF,A5S,WBON			15.90	C
2	2	A55 J6 EB	Roundabout	A5114,EBON,A5S,EBOFF,A5N			27.99	D

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description
1	**A5N**	A5N	(untitled)	
1	**WBOFF**	WBOFF	(untitled)	
1	**A5S**	A5S	(untitled)	
1	**WBON**	WBON	(untitled)	
2	**A5114**	A5114	(untitled)	
2	**EBON**	EBON	(untitled)	
2	**A5S**	A5S	(untitled)	
2	**EBOFF**	EBOFF	(untitled)	
2	**A5N**	A5N	(untitled)	

Capacity Options

Junction	Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	**A5N**	0.00	99999.00
1	**WBOFF**	0.00	99999.00
1	**A5S**	0.00	99999.00
1	**WBON**	0.00	99999.00
2	**A5114**	0.00	99999.00
2	**EBON**	0.00	99999.00
2	**A5S**	0.00	99999.00
2	**EBOFF**	0.00	99999.00
2	**A5N**	0.00	99999.00

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	**A5N**	3.50	6.40	4.90	19.50	47.00	34.00	
1	**WBOFF**	5.10	8.10	17.00	27.00	47.00	43.00	
1	**A5S**	3.00	4.00	6.00	18.00	47.00	27.00	
1	**WBON**	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	**A5114**	4.30	8.60	5.00	20.00	48.00	48.00	
2	**EBON**	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	**A5S**	3.50	6.40	4.90	18.00	48.00	27.00	
2	**EBOFF**	3.40	6.50	1.00	30.50	48.00	39.00	
2	**A5N**	5.00	10.00	0.10	21.00	48.00	37.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	**A5N**		(calculated)	(calculated)	0.547	1343.496
1	**WBOFF**		(calculated)	(calculated)	0.680	2057.281
1	**A5S**		(calculated)	(calculated)	0.509	1112.116
1	**WBON**		(calculated)	(calculated)	Exit-only	Exit-only
2	**A5114**		(calculated)	(calculated)	0.569	1547.086
2	**EBON**		(calculated)	(calculated)	Exit-only	Exit-only
2	**A5S**		(calculated)	(calculated)	0.555	1370.930
2	**EBOFF**		(calculated)	(calculated)	0.498	1100.148
2	**A5N**		(calculated)	(calculated)	0.570	1490.932

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Junction	Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
1	**A5N**	None			
1	**WBOFF**	Percentage			92.00
1	**A5S**	Percentage			80.00
1	**WBON**	None			
2	**A5114**	Percentage			92.00
2	**EBON**	None			
2	**A5S**	None			
2	**EBOFF**	Percentage			75.00
2	**A5N**	Percentage			97.00

Entry Lane Analysis: Arm options

Junction	Arm	Lane Capacity Source	Traffic Considering Secondary Lanes (%)
1	**A5N**	Evenly split	10.00
1	**WBOFF**	Evenly split	10.00
1	**A5S**	Evenly split	10.00
1	**WBON**	Evenly split	10.00
2	**A5114**	Evenly split	10.00
2	**EBON**	Evenly split	10.00
2	**A5S**	Evenly split	10.00
2	**EBOFF**	Evenly split	10.00
2	**A5N**	Evenly split	10.00

Lanes

Junction	Arm	Lane Level	Lane	Has Limited Storage	Storage (PCU)	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	**A5N**	**1**	1		Infinity	0.00	99999.00
1	**WBOFF**	**1**	1	✓	7.00	0.00	99999.00
1	**WBOFF**	**1**	2	✓	7.00	0.00	99999.00
1	**WBOFF**	**2**	2		Infinity		
1	**A5S**	**1**	1		Infinity	0.00	99999.00
1	**WBON**	**1**	1		Infinity	0.00	99999.00
2	**A5114**	**1**	1	✓	9.00	0.00	99999.00
2	**A5114**	**1**	2	✓	9.00	0.00	99999.00
2	**A5114**	**2**	1		Infinity		
2	**EBON**	**1**	1		Infinity	0.00	99999.00
2	**A5S**	**1**	1		Infinity	0.00	99999.00
2	**EBOFF**	**1**	1		Infinity	0.00	99999.00
2	**A5N**	**1**	1	✓	8.00	0.00	99999.00
2	**A5N**	**1**	2	✓	8.00	0.00	99999.00
2	**A5N**	**2**	2		Infinity		

Entry Lane slope and intercept

Junction	Arm	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	**A5N**	(calculated)	(calculated)	0.547	1343.496
1	**WBOFF**	(calculated)	(calculated)	0.340	1028.641
1	**WBOFF**	(calculated)	(calculated)	0.340	1028.641
1	**A5S**	(calculated)	(calculated)	0.509	1112.116
1	**WBON**	(calculated)	(calculated)	Exit-only	Exit-only
2	**A5114**	(calculated)	(calculated)	0.285	773.543
2	**A5114**	(calculated)	(calculated)	0.285	773.543
2	**EBON**	(calculated)	(calculated)	Exit-only	Exit-only
2	**A5S**	(calculated)	(calculated)	0.555	1370.930
2	**EBOFF**	(calculated)	(calculated)	0.498	1100.148
2	**A5N**	(calculated)	(calculated)	0.285	745.466
2	**A5N**	(calculated)	(calculated)	0.285	745.466

Lane Movements

Junction	Arm	Lane Level	Lane	Arm			
				A5N	WBOFF	A5S	WBON
1	A5N	1	1	✓	✓	✓	✓
1	WBOFF	1	1			✓	✓
1	WBOFF	1	2	✓	✓		
1	WBOFF	2	2	✓	✓	✓	✓
1	A5S	1	1	✓	✓	✓	✓
1	WBON	1	1	✓	✓	✓	✓

Lane Movements

Junction	Arm	Lane Level	Lane	Arm				
				A5114	EBON	A5S	EBOFF	A5N
2	A5114	1	1		✓			
2	A5114	1	2	✓		✓	✓	✓
2	A5114	2	1	✓	✓	✓	✓	✓
2	EBON	1	1	✓	✓	✓	✓	✓
2	A5S	1	1	✓	✓	✓	✓	✓
2	EBOFF	1	1	✓	✓	✓	✓	✓
2	A5N	1	1	✓				
2	A5N	1	2		✓	✓	✓	✓
2	A5N	2	2	✓	✓	✓	✓	✓

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	A5N	Linked Arm		N/A	
1	WBOFF	ONE HOUR	✓	545.00	100.000
1	A5S	ONE HOUR	✓	320.00	100.000
1	WBON	Exit-only	✓	Exit-only	Exit-only
2	A5114	ONE HOUR	✓	976.00	100.000
2	EBON	Exit-only	✓	Exit-only	Exit-only
2	A5S	Linked Arm		N/A	
2	EBOFF	ONE HOUR	✓	212.00	100.000
2	A5N	ONE HOUR	✓	277.00	100.000

Linked Arm Data

Junction	Arm	From Junction ID	From Arm ID	Link Type	Flow Source	Uniform Flow (PCU/hr)	Flow Multiplier (%)	Internal Storage Space (PCU)
1	A5N	2	A5S	Simple (vertical queueing)	Normal	0.00	100.00	
2	A5S	1	A5N	Simple (vertical queueing)	Normal	0.00	100.00	

Direct/Resultant Flows

Direct Flows Data

Time Segment	Junction	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	1	A5N	0.00	0.00		
16:15-16:30	1	WBOFF	410.30	410.30		
16:15-16:30	1	A5S	240.91	240.91		
16:15-16:30	1	WBON	Exit-only	0.00		
16:30-16:45	1	A5N	0.00	0.00		
16:30-16:45	1	WBOFF	489.94	489.94		
16:30-16:45	1	A5S	287.67	287.67		
16:30-16:45	1	WBON	Exit-only	0.00		
16:45-17:00	1	A5N	0.00	0.00		
16:45-17:00	1	WBOFF	600.06	600.06		
16:45-17:00	1	A5S	352.33	352.33		
16:45-17:00	1	WBON	Exit-only	0.00		
17:00-17:15	1	A5N	0.00	0.00		
17:00-17:15	1	WBOFF	600.06	600.06		
17:00-17:15	1	A5S	352.33	352.33		
17:00-17:15	1	WBON	Exit-only	0.00		
17:15-17:30	1	A5N	0.00	0.00		
17:15-17:30	1	WBOFF	489.94	489.94		
17:15-17:30	1	A5S	287.67	287.67		
17:15-17:30	1	WBON	Exit-only	0.00		
17:30-17:45	1	A5N	0.00	0.00		
17:30-17:45	1	WBOFF	410.30	410.30		

17:30-17:45	1	A5S	240.91	240.91		
17:30-17:45	1	WBON	Exit-only	0.00		
16:15-16:30	2	A5114	734.78	734.78		
16:15-16:30	2	EBON	Exit-only	0.00		
16:15-16:30	2	A5S	0.00	0.00		
16:15-16:30	2	EBOFF	159.60	159.60		
16:15-16:30	2	A5N	208.54	208.54		
16:30-16:45	2	A5114	877.40	877.40		
16:30-16:45	2	EBON	Exit-only	0.00		
16:30-16:45	2	A5S	0.00	0.00		
16:30-16:45	2	EBOFF	190.58	190.58		
16:30-16:45	2	A5N	249.02	249.02		
16:45-17:00	2	A5114	1074.60	1074.60		
16:45-17:00	2	EBON	Exit-only	0.00		
16:45-17:00	2	A5S	0.00	0.00		
16:45-17:00	2	EBOFF	233.42	233.42		
16:45-17:00	2	A5N	304.98	304.98		
17:00-17:15	2	A5114	1074.60	1074.60		
17:00-17:15	2	EBON	Exit-only	0.00		
17:00-17:15	2	A5S	0.00	0.00		
17:00-17:15	2	EBOFF	233.42	233.42		
17:00-17:15	2	A5N	304.98	304.98		
17:15-17:30	2	A5114	877.40	877.40		
17:15-17:30	2	EBON	Exit-only	0.00		
17:15-17:30	2	A5S	0.00	0.00		
17:15-17:30	2	EBOFF	190.58	190.58		
17:15-17:30	2	A5N	249.02	249.02		
17:30-17:45	2	A5114	734.78	734.78		
17:30-17:45	2	EBON	Exit-only	0.00		

17:30-17:45	2	A5S	0.00	0.00		
17:30-17:45	2	EBOFF	159.60	159.60		
17:30-17:45	2	A5N	208.54	208.54		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.000	0.000	275.000	244.000
	WBOFF	536.000	0.000	9.000	0.000
	A5S	244.000	0.000	0.000	76.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.00	0.00	0.53	0.47
	WBOFF	0.98	0.00	0.02	0.00
	A5S	0.76	0.00	0.00	0.24
	WBON	0.25	0.25	0.25	0.25

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Counts / Proportions (PCU/hr) - Junction 2 (for whole period)

		To				
		A5114	EBON	A5S	EBOFF	A5N
From	A5114	0.000	441.000	415.000	0.000	120.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	448.000	5.000	0.000	0.000	354.000
	EBOFF	162.000	0.000	40.000	0.000	10.000
	A5N	72.000	144.000	61.000	0.000	0.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 2 (for whole period)

		To				
		A5114	EBON	A5S	EBOFF	A5N
From	A5114	0.00	0.45	0.43	0.00	0.12
	EBON	0.20	0.20	0.20	0.20	0.20
	A5S	0.56	0.01	0.00	0.00	0.44
	EBOFF	0.76	0.00	0.19	0.00	0.05
	A5N	0.26	0.52	0.22	0.00	0.00

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	1.000	1.000	1.000	1.000
	WBOFF	1.000	1.000	1.000	1.000
	A5S	1.000	1.000	1.000	1.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.0	0.0	0.0	0.0
	WBOFF	0.0	0.0	0.0	0.0
	A5S	0.0	0.0	0.0	0.0
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Average PCU Per Vehicle - Junction 2 (for whole period)

		To				
		A5114	EBON	A5S	EBOFF	A5N
From	A5114	1.000	1.000	1.000	1.000	1.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	1.000	1.000	1.000	1.000	1.000
	EBOFF	1.000	1.000	1.000	1.000	1.000
	A5N	1.000	1.000	1.000	1.000	1.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 2 (for whole period)

		To				
		A5114	EBON	A5S	EBOFF	A5N
From	A5114	0.0	0.0	0.0	0.0	0.0
	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	0.0	0.0	0.0	0.0	0.0
	EBOFF	0.0	0.0	0.0	0.0	0.0
	A5N	0.0	0.0	0.0	0.0	0.0

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Generated on 05/06/2018 15:09:31 using Junctions 8 (8.0.6.541)

Results

Results Summary for whole modelled period

Junction	Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)
1	A5N	1.64	0.26	1.62	A	469.56	704.34	16.22	1.38	0.18
1	WBOFF	25.78	4.47	15.37	D	500.29	750.43	179.03	14.31	1.99
1	A5S	21.90	2.07	7.40	C	291.43	437.14	93.56	12.84	1.04
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	56.58	18.23	56.12	F	898.77	1348.15	644.44	28.68	7.16
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	3.39	0.85	3.00	A	715.98	1073.97	47.06	2.63	0.52
2	EBOFF	13.42	0.83	3.41	B	195.38	293.07	43.95	9.00	0.49
2	A5N	7.44	0.68	2.70	A	254.32	381.47	36.61	5.76	0.41

Main Results for each time segment

Main results: (16:15-16:30)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	388.01	97.00	389.36	581.27	0.00	0.00	0.10	1.041	A
1	WBOFF	409.49	102.37	409.38	0.00	389.36	0.00	0.59	5.253	A
1	A5S	238.94	59.73	235.08	213.94	585.13	0.00	0.44	5.409	A
1	WBON	Exit-only	Exit-only	Exit-only	238.94	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	751.48	187.87	751.59	498.90	187.16	0.00	1.90	8.568	A
2	EBON	Exit-only	Exit-only	Exit-only	452.60	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	581.27	145.32	582.61	388.01	93.05	0.00	0.28	1.797	A
2	EBOFF	156.91	39.23	155.51	0.00	675.66	0.00	0.23	4.880	A
2	A5N	210.48	52.62	210.48	354.02	477.15	0.00	0.25	4.117	A

Main results: (16:30-16:45)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	465.52	116.38	463.34	698.58	0.00	0.00	0.19	1.256	A
1	WBOFF	489.23	122.31	489.90	0.00	463.34	0.00	1.22	8.874	A
1	A5S	281.66	70.41	283.06	252.47	701.71	0.00	0.71	8.762	A
1	WBON	Exit-only	Exit-only	Exit-only	286.19	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	876.96	219.24	878.86	604.14	218.14	0.00	3.83	14.940	B
2	EBON	Exit-only	Exit-only	Exit-only	520.93	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	698.58	174.65	697.07	465.52	106.69	0.00	0.49	2.356	A
2	EBOFF	190.34	47.59	188.33	0.00	803.77	0.00	0.41	7.104	A
2	A5N	245.87	61.47	245.87	415.97	576.12	0.00	0.36	5.176	A

Generated on 05/06/2018 15:09:31 using Junctions 8 (8.0.6.541)

Main results: (16:45-17:00)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	551.24	137.81	556.33	863.37	0.00	0.19	0.21	1.603	A
1	WBOFF	603.30	150.82	594.91	0.00	556.33	1.22	4.21	21.296	C
1	A5S	353.01	88.25	355.53	304.25	849.51	0.71	2.07	18.283	C
1	WBON	Exit-only	Exit-only	Exit-only	341.66	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1077.76	269.44	1044.04	738.45	271.65	3.83	14.62	37.660	E
2	EBON	Exit-only	Exit-only	Exit-only	641.66	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	863.37	215.84	862.87	551.24	128.33	0.49	0.78	3.252	A
2	EBOFF	232.12	58.03	233.35	0.00	991.20	0.41	0.83	12.362	B
2	A5N	301.23	75.31	301.23	513.44	711.11	0.36	0.67	7.058	A

Main results: (17:00-17:15)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	556.44	139.11	554.59	863.99	0.00	0.21	0.26	1.644	A
1	WBOFF	603.63	150.91	601.85	0.00	554.59	4.21	4.47	25.779	D
1	A5S	345.80	86.45	352.84	301.01	859.57	2.07	2.05	21.900	C
1	WBON	Exit-only	Exit-only	Exit-only	348.42	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1073.79	268.45	1050.48	736.44	282.16	14.62	18.23	56.580	F
2	EBON	Exit-only	Exit-only	Exit-only	641.04	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	863.99	216.00	858.45	556.44	130.12	0.78	0.85	3.387	A
2	EBOFF	240.73	60.18	241.96	0.00	988.57	0.83	0.83	13.421	B
2	A5N	314.48	78.62	314.48	522.27	708.26	0.67	0.68	7.437	A

Main results: (17:15-17:30)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	466.64	116.66	469.99	700.88	0.00	0.26	0.15	1.427	A
1	WBOFF	482.91	120.73	482.57	0.00	469.99	4.47	1.17	11.884	B
1	A5S	286.36	71.59	290.61	253.14	699.37	2.05	0.68	10.468	B
1	WBON	Exit-only	Exit-only	Exit-only	289.10	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	877.47	219.37	885.52	602.52	216.29	18.23	4.46	30.369	D
2	EBON	Exit-only	Exit-only	Exit-only	532.23	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	700.88	175.22	694.39	466.64	110.16	0.85	0.52	2.544	A
2	EBOFF	189.17	47.29	190.68	0.00	804.55	0.83	0.38	8.128	A
2	A5N	243.02	60.75	243.02	417.93	577.30	0.68	0.38	5.335	A

Generated on 05/06/2018 15:09:31 using Junctions 8 (8.0.6.541)

Main results: (17:30-17:45)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	389.52	97.38	389.80	587.81	0.00	0.15	0.09	1.044	A
1	WBOFF	413.18	103.29	412.56	0.00	389.80	1.17	0.67	5.702	A
1	A5S	242.80	60.70	242.01	216.57	583.06	0.68	0.39	5.774	A
1	WBON	Exit-only	Exit-only	Exit-only	237.26	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	735.15	183.79	735.55	505.00	192.47	4.46	1.96	10.024	B
2	EBON	Exit-only	Exit-only	Exit-only	446.23	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	587.81	146.95	588.70	389.52	90.75	0.52	0.26	1.871	A
2	EBOFF	163.00	40.75	163.62	0.00	679.46	0.38	0.23	5.221	A
2	A5N	210.81	52.70	210.81	356.37	486.71	0.38	0.25	4.272	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1.67	0.11	1.041	A	A
1	WBOFF	8.89	0.59	5.253	A	A
1	A5S	5.40	0.36	5.409	A	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	26.02	1.73	8.568	A	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	4.36	0.29	1.797	A	A
2	EBOFF	3.22	0.21	4.880	A	A
2	A5N	3.53	0.24	4.117	A	A

Queueing Delay results: (16:30-16:45)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	2.41	0.16	1.256	A	A
1	WBOFF	18.03	1.20	8.874	A	A
1	A5S	10.47	0.70	8.762	A	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	54.07	3.60	14.940	B	B
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	6.86	0.46	2.356	A	A
2	EBOFF	5.60	0.37	7.104	A	A
2	A5N	5.32	0.35	5.176	A	A

Queueing Delay results: (16:45-17:00)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	3.65	0.24	1.603	A	A
1	WBOFF	52.00	3.47	21.296	C	C
1	A5S	26.22	1.75	18.283	C	B
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	158.08	10.54	37.660	E	D
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	11.44	0.76	3.252	A	A
2	EBOFF	11.93	0.80	12.362	B	B
2	A5N	8.90	0.59	7.058	A	A

Queueing Delay results: (17:00-17:15)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	3.84	0.26	1.644	A	A
1	WBOFF	64.16	4.28	25.779	D	C
1	A5S	32.24	2.15	21.900	C	C
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	246.42	16.43	56.580	F	E
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	12.13	0.81	3.387	A	A
2	EBOFF	13.04	0.87	13.421	B	B
2	A5N	9.47	0.63	7.437	A	A

Queueing Delay results: (17:15-17:30)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	2.92	0.19	1.427	A	A
1	WBOFF	25.95	1.73	11.884	B	B
1	A5S	13.26	0.88	10.468	B	B
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	127.00	8.47	30.369	D	C
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	7.62	0.51	2.544	A	A
2	EBOFF	6.59	0.44	8.128	A	A
2	A5N	5.59	0.37	5.335	A	A

Queueing Delay results: (17:30-17:45)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1.73	0.12	1.044	A	A
1	WBOFF	10.01	0.67	5.702	A	A
1	A5S	5.96	0.40	5.774	A	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	32.85	2.19	10.024	B	B
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	4.65	0.31	1.871	A	A
2	EBOFF	3.57	0.24	5.221	A	A
2	A5N	3.79	0.25	4.272	A	A

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.10	0.00	0.00	0.00	0.46
1	WBOFF	0.59	0.00	0.00	1.66	2.60
1	A5S	0.44	0.00	0.00	1.20	1.96
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1.90	0.00	0.63	4.67	6.47
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.28	0.00	0.00	0.75	1.67
2	EBOFF	0.23	0.00	0.00	0.56	1.11
2	A5N	0.25	0.00	0.00	0.60	1.16

Queue Variation results: (16:30-16:45)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.19	0.00	0.00	0.31	1.10
1	WBOFF	1.22	0.00	0.00	3.29	4.82
1	A5S	0.71	0.00	0.00	1.93	2.83
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	3.83	0.00	2.12	8.64	11.03
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.49	0.00	0.00	1.73	3.00
2	EBOFF	0.41	0.00	0.00	1.01	1.81
2	A5N	0.36	0.00	0.00	0.89	1.60

Queue Variation results: (16:45-17:00)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.21	0.00	0.00	0.41	1.20
1	WBOFF	4.21	0.00	1.91	10.84	13.71
1	A5S	2.07	0.00	0.49	5.51	7.07
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	14.62	0.00	9.23	34.70	43.07
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.78	0.00	0.00	3.00	3.00
2	EBOFF	0.83	0.00	0.00	2.30	3.41
2	A5N	0.67	0.00	0.00	1.77	2.70

Queue Variation results: (17:00-17:15)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.26	0.00	0.00	0.74	1.62
1	WBOFF	4.47	0.00	2.17	11.54	15.37
1	A5S	2.05	0.00	0.44	5.53	7.40
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	18.23	0.00	10.87	43.67	56.12
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.85	0.00	0.00	3.00	3.00
2	EBOFF	0.83	0.00	0.00	2.31	3.25
2	A5N	0.68	0.00	0.00	1.87	2.62

Queue Variation results: (17:15-17:30)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.15	0.00	0.00	0.00	0.79
1	WBOFF	1.17	0.00	0.00	3.02	4.60
1	A5S	0.68	0.00	0.00	1.85	2.86
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	4.46	0.00	2.09	8.91	14.34
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.52	0.00	0.00	1.80	3.00
2	EBOFF	0.38	0.00	0.00	0.89	1.61
2	A5N	0.38	0.00	0.00	0.93	1.68

Queue Variation results: (17:30-17:45)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.09	0.00	0.00	0.00	0.32
1	WBOFF	0.67	0.00	0.00	1.95	2.90
1	A5S	0.39	0.00	0.00	0.94	1.70
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1.96	0.00	0.76	4.61	6.21
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.26	0.00	0.00	0.67	1.56
2	EBOFF	0.23	0.00	0.00	0.52	1.01
2	A5N	0.25	0.00	0.00	0.64	1.12

Lane Results

Lanes: Main Results for each time segment

Main results: (16:15-16:30)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	388.01	97.00	389.36	1343.50	0.289	0.00	0.10	1.041	A
1	WBOFF	1	1	6.71	1.68	6.88	824.52	0.008	0.00	0.00	1.117	A
1	WBOFF	1	2	402.67	100.67	402.83	824.52	0.488	0.00	0.58	5.276	A
1	WBOFF	2	2	409.49	102.37	409.38			0.00	0.01	0.042	A
1	A5S	1	1	238.94	59.73	235.08	651.57	0.367	0.00	0.44	5.409	A
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	340.71	85.18	337.35	662.64	0.514	0.00	0.71	7.016	A
2	A5114	1	2	410.89	102.72	409.15	662.64	0.620	0.00	1.17	9.667	A
2	A5114	2	1	751.48	187.87	751.59			0.00	0.02	0.092	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	581.27	145.32	582.61	1319.27	0.441	0.00	0.28	1.797	A
2	EBOFF	1	1	156.91	39.23	155.51	572.96	0.274	0.00	0.23	4.880	A
2	A5N	1	1	56.25	14.06	56.42	591.11	0.095	0.00	0.04	3.057	A
2	A5N	1	2	154.22	38.56	152.49	591.11	0.261	0.00	0.21	4.486	A
2	A5N	2	2	210.48	52.62	210.48			0.00	0.00	0.000	A

Main results: (16:30-16:45)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	465.52	116.38	463.34	1343.50	0.347	0.10	0.19	1.256	A
1	WBOFF	1	1	9.17	2.29	8.95	801.37	0.011	0.00	0.01	1.149	A
1	WBOFF	1	2	480.73	120.18	481.90	801.37	0.600	0.58	1.17	8.634	A
1	WBOFF	2	2	489.23	122.31	489.90			0.01	0.05	0.360	A
1	A5S	1	1	281.66	70.41	283.06	604.13	0.466	0.44	0.71	8.762	A
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	399.59	99.90	392.21	654.52	0.611	0.71	1.17	10.472	B
2	A5114	1	2	479.27	119.82	482.80	654.52	0.732	1.17	2.33	16.403	C
2	A5114	2	1	876.96	219.24	878.86			0.02	0.33	1.183	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	698.58	174.65	697.07	1311.70	0.533	0.28	0.49	2.356	A
2	EBOFF	1	1	190.34	47.59	188.33	525.15	0.362	0.23	0.41	7.104	A
2	A5N	1	1	66.15	16.54	66.15	563.73	0.117	0.04	0.06	3.470	A
2	A5N	1	2	179.72	44.93	180.00	563.73	0.319	0.21	0.29	5.780	A
2	A5N	2	2	245.87	61.47	245.87			0.00	0.00	0.000	A

Main results: (16:45-17:00)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	551.24	137.81	556.33	1343.50	0.410	0.19	0.21	1.603	A
1	WBOFF	1	1	8.95	2.24	9.11	772.27	0.012	0.01	0.00	1.409	A
1	WBOFF	1	2	585.96	146.49	588.31	772.27	0.759	1.17	3.10	17.065	C
1	WBOFF	2	2	603.30	150.82	594.91			0.05	1.11	4.354	A
1	A5S	1	1	353.01	88.25	355.53	543.98	0.649	0.71	2.07	18.283	C
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	474.07	118.52	481.51	640.51	0.740	1.17	2.48	17.843	C
2	A5114	1	2	569.97	142.49	568.07	640.51	0.890	2.33	5.44	29.732	D
2	A5114	2	1	1077.76	269.44	1044.04			0.33	6.70	12.984	B
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	863.37	215.84	862.87	1299.68	0.664	0.49	0.78	3.252	A
2	EBOFF	1	1	232.12	58.03	233.35	455.19	0.510	0.41	0.83	12.362	B
2	A5N	1	1	76.89	19.22	77.78	526.38	0.146	0.06	0.10	4.218	A
2	A5N	1	2	224.34	56.09	221.21	526.38	0.426	0.29	0.57	8.065	A
2	A5N	2	2	301.23	75.31	301.23			0.00	0.00	0.007	A

Main results: (17:00-17:15)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	556.44	139.11	554.59	1343.50	0.414	0.21	0.26	1.644	A
1	WBOFF	1	1	10.01	2.50	10.34	772.81	0.013	0.00	0.00	1.302	A
1	WBOFF	1	2	591.84	147.96	595.64	772.81	0.766	3.10	3.12	18.834	C
1	WBOFF	2	2	603.63	150.91	601.85			1.11	1.35	7.219	A
1	A5S	1	1	345.80	86.45	352.84	539.89	0.641	2.07	2.05	21.900	C
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	477.65	119.41	472.79	637.75	0.749	2.48	2.65	20.409	C
2	A5114	1	2	572.82	143.21	572.66	637.75	0.898	5.44	5.59	34.256	D
2	A5114	2	1	1073.79	268.45	1050.48			6.70	10.00	28.480	D
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	863.99	216.00	858.45	1298.69	0.665	0.78	0.85	3.387	A
2	EBOFF	1	1	240.73	60.18	241.96	456.18	0.528	0.83	0.83	13.421	B
2	A5N	1	1	79.74	19.93	78.51	527.17	0.151	0.10	0.10	4.400	A
2	A5N	1	2	234.74	58.69	231.84	527.17	0.445	0.57	0.58	8.490	A
2	A5N	2	2	314.48	78.62	314.48			0.00	0.00	0.013	A

Main results: (17:15-17:30)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	466.64	116.66	469.99	1343.50	0.347	0.26	0.15	1.427	A
1	WBOFF	1	1	6.88	1.72	6.82	799.28	0.009	0.00	0.00	1.203	A
1	WBOFF	1	2	475.69	118.92	475.69	799.28	0.595	3.12	1.12	10.686	B
1	WBOFF	2	2	482.91	120.73	482.57			1.35	0.05	1.617	A
1	A5S	1	1	286.36	71.59	290.61	605.08	0.473	2.05	0.68	10.468	B
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	406.58	101.64	403.39	655.01	0.621	2.65	1.32	14.110	B
2	A5114	1	2	478.94	119.73	489.34	655.01	0.731	5.59	2.28	23.548	C
2	A5114	2	1	877.47	219.37	885.52			10.00	0.86	11.831	B
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	700.88	175.22	694.39	1309.77	0.535	0.85	0.52	2.544	A
2	EBOFF	1	1	189.17	47.29	190.68	524.85	0.360	0.83	0.38	8.128	A
2	A5N	1	1	64.03	16.01	64.08	563.40	0.114	0.10	0.07	3.608	A
2	A5N	1	2	178.99	44.75	177.43	563.40	0.318	0.58	0.32	5.942	A
2	A5N	2	2	243.02	60.75	243.02			0.00	0.00	0.001	A

Main results: (17:30-17:45)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	389.52	97.38	389.80	1343.50	0.290	0.15	0.09	1.044	A
1	WBOFF	1	1	6.49	1.62	6.43	824.38	0.008	0.00	0.00	1.261	A
1	WBOFF	1	2	406.08	101.52	403.39	824.38	0.493	1.12	0.66	5.746	A
1	WBOFF	2	2	413.18	103.29	412.56			0.05	0.01	0.049	A
1	A5S	1	1	242.80	60.70	242.01	652.42	0.372	0.68	0.39	5.774	A
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	331.20	82.80	330.70	661.25	0.501	1.32	0.73	7.651	A
2	A5114	1	2	404.34	101.09	403.34	661.25	0.611	2.28	1.20	11.117	B
2	A5114	2	1	735.15	183.79	735.55			0.86	0.03	0.601	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	587.81	146.95	588.70	1320.54	0.445	0.52	0.26	1.871	A
2	EBOFF	1	1	163.00	40.75	163.62	571.54	0.285	0.38	0.23	5.221	A
2	A5N	1	1	52.56	13.14	53.18	588.46	0.089	0.07	0.04	3.138	A
2	A5N	1	2	158.25	39.56	157.58	588.46	0.269	0.32	0.21	4.661	A
2	A5N	2	2	210.81	52.70	210.81			0.00	0.00	0.000	A

Lanes: Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	1.67	0.11	1.041	A	A
1	WBOFF	1	1	0.03	0.00	1.117	A	A
1	WBOFF	1	2	8.79	0.59	5.276	A	A
1	WBOFF	2	2	0.07	0.00	0.042	A	A
1	A5S	1	1	5.40	0.36	5.409	A	A
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	9.64	0.64	7.016	A	A
2	A5114	1	2	16.10	1.07	9.667	A	A
2	A5114	2	1	0.28	0.02	0.092	A	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	4.36	0.29	1.797	A	A
2	EBOFF	1	1	3.22	0.21	4.880	A	A
2	A5N	1	1	0.68	0.05	3.057	A	A
2	A5N	1	2	2.85	0.19	4.486	A	A
2	A5N	2	2	0.00	0.00	0.000	A	A

Queueing Delay results: (16:30-16:45)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	2.41	0.16	1.256	A	A
1	WBOFF	1	1	0.04	0.00	1.149	A	A
1	WBOFF	1	2	17.26	1.15	8.634	A	A
1	WBOFF	2	2	0.73	0.05	0.360	A	A
1	A5S	1	1	10.47	0.70	8.762	A	A
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	17.20	1.15	10.472	B	B
2	A5114	1	2	32.63	2.18	16.403	C	B
2	A5114	2	1	4.23	0.28	1.183	A	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	6.86	0.46	2.356	A	A
2	EBOFF	1	1	5.60	0.37	7.104	A	A
2	A5N	1	1	0.93	0.06	3.470	A	A
2	A5N	1	2	4.39	0.29	5.780	A	A
2	A5N	2	2	0.00	0.00	0.000	A	A

Queueing Delay results: (16:45-17:00)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	3.65	0.24	1.603	A	A
1	WBOFF	1	1	0.06	0.00	1.409	A	A
1	WBOFF	1	2	41.38	2.76	17.065	C	B
1	WBOFF	2	2	10.56	0.70	4.354	A	A
1	A5S	1	1	26.22	1.75	18.283	C	B
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	34.78	2.32	17.843	C	B
2	A5114	1	2	70.02	4.67	29.732	D	C
2	A5114	2	1	53.27	3.55	12.984	B	B
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	11.44	0.76	3.252	A	A
2	EBOFF	1	1	11.93	0.80	12.362	B	B
2	A5N	1	1	1.41	0.09	4.218	A	A
2	A5N	1	2	7.48	0.50	8.065	A	A
2	A5N	2	2	0.01	0.00	0.007	A	A

Queueing Delay results: (17:00-17:15)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	3.84	0.26	1.644	A	A
1	WBOFF	1	1	0.06	0.00	1.302	A	A
1	WBOFF	1	2	46.24	3.08	18.834	C	B
1	WBOFF	2	2	17.86	1.19	7.219	A	A
1	A5S	1	1	32.24	2.15	21.900	C	C
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	40.65	2.71	20.409	C	C
2	A5114	1	2	82.74	5.52	34.256	D	C
2	A5114	2	1	123.03	8.20	28.480	D	C
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	12.13	0.81	3.387	A	A
2	EBOFF	1	1	13.04	0.87	13.421	B	B
2	A5N	1	1	1.46	0.10	4.400	A	A
2	A5N	1	2	8.00	0.53	8.490	A	A
2	A5N	2	2	0.02	0.00	0.013	A	A

Queueing Delay results: (17:15-17:30)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	2.92	0.19	1.427	A	A
1	WBOFF	1	1	0.04	0.00	1.203	A	A
1	WBOFF	1	2	22.05	1.47	10.686	B	B
1	WBOFF	2	2	3.86	0.26	1.617	A	A
1	A5S	1	1	13.26	0.88	10.468	B	B
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	24.71	1.65	14.110	B	B
2	A5114	1	2	50.47	3.36	23.548	C	C
2	A5114	2	1	51.82	3.45	11.831	B	B
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	7.62	0.51	2.544	A	A
2	EBOFF	1	1	6.59	0.44	8.128	A	A
2	A5N	1	1	0.98	0.07	3.608	A	A
2	A5N	1	2	4.61	0.31	5.942	A	A
2	A5N	2	2	0.00	0.00	0.001	A	A

Queueing Delay results: (17:30-17:45)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	1.73	0.12	1.044	A	A
1	WBOFF	1	1	0.04	0.00	1.261	A	A
1	WBOFF	1	2	9.88	0.66	5.746	A	A
1	WBOFF	2	2	0.09	0.01	0.049	A	A
1	A5S	1	1	5.96	0.40	5.774	A	A
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	10.97	0.73	7.651	A	A
2	A5114	1	2	19.47	1.30	11.117	B	B
2	A5114	2	1	2.41	0.16	0.601	A	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	4.65	0.31	1.871	A	A
2	EBOFF	1	1	3.57	0.24	5.221	A	A
2	A5N	1	1	0.71	0.05	3.138	A	A
2	A5N	1	2	3.08	0.21	4.661	A	A
2	A5N	2	2	0.00	0.00	0.000	A	A

Lanes: Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.10	0.00	0.00	0.00	0.46
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	0.58	0.00	0.00	1.66	2.60
1	WBOFF	2	2	0.01	0.00	0.00	0.00	0.00
1	A5S	1	1	0.44	0.00	0.00	1.20	1.96
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	0.71	0.00	0.00	1.93	2.97
2	A5114	1	2	1.17	0.00	0.00	3.17	4.57
2	A5114	2	1	0.02	0.00	0.00	0.00	0.00
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.28	0.00	0.00	0.75	1.67
2	EBOFF	1	1	0.23	0.00	0.00	0.56	1.11
2	A5N	1	1	0.04	0.00	0.00	0.00	0.00
2	A5N	1	2	0.21	0.00	0.00	0.41	0.96
2	A5N	2	2	0.00	0.00	0.00	0.00	0.00

Queue Variation results: (16:30-16:45)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.19	0.00	0.00	0.31	1.10
1	WBOFF	1	1	0.01	0.00	0.00	0.00	0.00
1	WBOFF	1	2	1.17	0.00	0.00	3.29	4.82
1	WBOFF	2	2	0.05	0.00	0.00	0.00	0.00
1	A5S	1	1	0.71	0.00	0.00	1.93	2.83
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	1.17	0.00	0.00	3.20	5.02
2	A5114	1	2	2.33	0.00	0.78	6.21	9.00
2	A5114	2	1	0.33	0.00	0.00	0.00	0.15
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.49	0.00	0.00	1.73	3.00
2	EBOFF	1	1	0.41	0.00	0.00	1.01	1.81
2	A5N	1	1	0.06	0.00	0.00	0.00	0.12
2	A5N	1	2	0.29	0.00	0.00	0.74	1.39
2	A5N	2	2	0.00	0.00	0.00	0.00	0.00

Queue Variation results: (16:45-17:00)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.21	0.00	0.00	0.41	1.20
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	3.10	0.00	1.91	7.00	7.00
1	WBOFF	2	2	1.11	0.00	0.00	3.84	6.71
1	A5S	1	1	2.07	0.00	0.49	5.51	7.07
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	2.48	0.00	0.84	7.20	9.00
2	A5114	1	2	5.44	0.00	5.46	9.00	9.00
2	A5114	2	1	6.70	0.00	0.00	23.87	31.87
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.78	0.00	0.00	3.00	3.00
2	EBOFF	1	1	0.83	0.00	0.00	2.30	3.41
2	A5N	1	1	0.10	0.00	0.00	0.00	0.46
2	A5N	1	2	0.57	0.00	0.00	1.59	2.50
2	A5N	2	2	0.00	0.00	0.00	0.00	0.00

Queue Variation results: (17:00-17:15)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.26	0.00	0.00	0.74	1.62
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	3.12	0.00	2.17	7.00	7.00
1	WBOFF	2	2	1.35	0.00	0.00	4.54	8.37
1	A5S	1	1	2.05	0.00	0.44	5.53	7.40
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	2.65	0.00	0.99	7.85	9.00
2	A5114	1	2	5.59	0.00	6.32	9.00	9.00
2	A5114	2	1	10.00	0.00	0.00	30.97	46.18
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.85	0.00	0.00	3.00	3.00
2	EBOFF	1	1	0.83	0.00	0.00	2.31	3.25
2	A5N	1	1	0.10	0.00	0.00	0.00	0.51
2	A5N	1	2	0.58	0.00	0.00	1.70	2.51
2	A5N	2	2	0.00	0.00	0.00	0.00	0.00

Queue Variation results: (17:15-17:30)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.15	0.00	0.00	0.00	0.79
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	1.12	0.00	0.00	3.02	4.60
1	WBOFF	2	2	0.05	0.00	0.00	0.00	0.00
1	A5S	1	1	0.68	0.00	0.00	1.85	2.86
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	1.32	0.00	0.00	3.61	5.36
2	A5114	1	2	2.28	0.00	0.68	6.64	9.00
2	A5114	2	1	0.86	0.00	0.00	0.00	2.84
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.52	0.00	0.00	1.80	3.00
2	EBOFF	1	1	0.38	0.00	0.00	0.89	1.61
2	A5N	1	1	0.07	0.00	0.00	0.00	0.16
2	A5N	1	2	0.32	0.00	0.00	0.79	1.53
2	A5N	2	2	0.00	0.00	0.00	0.00	0.00

Queue Variation results: (17:30-17:45)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.09	0.00	0.00	0.00	0.32
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	0.66	0.00	0.00	1.95	2.90
1	WBOFF	2	2	0.01	0.00	0.00	0.00	0.00
1	A5S	1	1	0.39	0.00	0.00	0.94	1.70
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	0.73	0.00	0.00	2.09	2.97
2	A5114	1	2	1.20	0.00	0.00	3.22	4.81
2	A5114	2	1	0.03	0.00	0.00	0.00	0.00
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.26	0.00	0.00	0.67	1.56
2	EBOFF	1	1	0.23	0.00	0.00	0.52	1.01
2	A5N	1	1	0.04	0.00	0.00	0.00	0.00
2	A5N	1	2	0.21	0.00	0.00	0.46	1.01
2	A5N	2	2	0.00	0.00	0.00	0.00	0.00

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A55J6_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A55 J6\2018 DF
Report generation date: 14/06/2018 11:03:42

« (Default Analysis Set) - 2023 Base, AM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Direct/Resultant Flows
» Turning Proportions
» Vehicle Mix
» Results
» Lane Results

Summary of junction performance

	AM				
	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS
	A1 [Entry Lane Simulation] - 2023 Base				
Junction 1 - Arm A5N	0.21	1.29	1.33	N/A	A
Junction 1 - Arm WBOFF	21.07	52.93	92.98	N/A	F
Junction 1 - Arm A5S	5.23	15.96	43.84	N/A	E
Junction 2 - Arm A5114	2.92	8.43	13.34	N/A	B
Junction 2 - Arm A5S	1.10	3.00	3.91	N/A	A
Junction 2 - Arm EBOFF	4.32	14.30	42.34	N/A	E
Junction 2 - Arm A5N	34.93	75.53	182.65	N/A	F

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM" model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:15 - 17:45
"D3 - 2023 Base, AM " model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:15 - 17:45
"D7 - 2023 Base + Dev + Seasonality, AM Aug" model duration: 10:45 - 12:15
"D8 - 2023 Base + Dev + Seasonality, PM Aug" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 11:03:38

File summary

Title	(untitled)
Location	
Site Number	
Date	27/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	RogersA2
Description	

Analysis Options

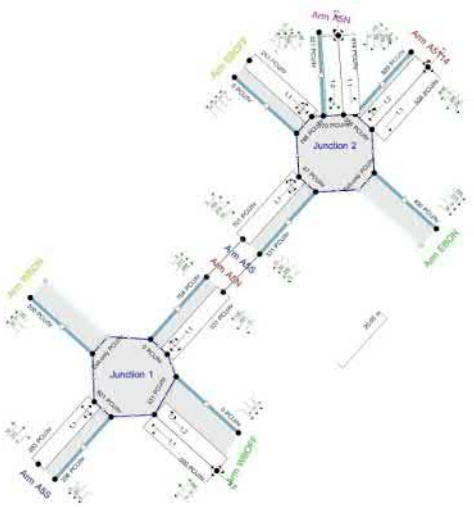
Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Entry Lane Analysis Options

Stop Criteria (%)	Random Seed	Results Refresh Speed (s)	Individual Vehicle Animation Number Of Trials	Time Step Size (s)	Last Run Random Seed	Last Run Number Of Trials
5.00	-1	3	1	10	1769251186	1537



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction 1 - Arm A5N	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Warning	Linked Roundabout	Junction 2 - Arm A5S	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	Entry Lane Simulation		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base, AM	2023 Base	AM		Varies by Arm	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	1	A55 J6 WB	Roundabout	A5N,WBOFF,A5S,WBON			52.96	F
2	2	A55 J6 EB	Roundabout	A5114,EBON,A5S,EBOFF,A5N			51.84	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description
1	A5N	A5N	(untitled)	
1	WBOFF	WBOFF	(untitled)	
1	A5S	A5S	(untitled)	
1	WBON	WBON	(untitled)	
2	A5114	A5114	(untitled)	
2	EBON	EBON	(untitled)	
2	A5S	A5S	(untitled)	
2	EBOFF	EBOFF	(untitled)	
2	A5N	A5N	(untitled)	

Capacity Options

Junction	Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	A5N	0.00	99999.00
1	WBOFF	0.00	99999.00
1	A5S	0.00	99999.00
1	WBON	0.00	99999.00
2	A5114	0.00	99999.00
2	EBON	0.00	99999.00
2	A5S	0.00	99999.00
2	EBOFF	0.00	99999.00
2	A5N	0.00	99999.00

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	A5N	3.50	6.40	4.90	19.50	47.00	34.00	
1	WBOFF	5.10	8.10	17.00	27.00	47.00	43.00	
1	A5S	3.00	4.00	6.00	18.00	47.00	27.00	
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	A5114	4.30	8.60	5.00	20.00	48.00	48.00	
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	A5S	3.50	6.40	4.90	18.00	48.00	27.00	
2	EBOFF	3.40	6.50	1.00	30.50	48.00	39.00	
2	A5N	5.00	10.00	0.10	21.00	48.00	37.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	A5N		(calculated)	(calculated)	0.547	1343.496
1	WBOFF		(calculated)	(calculated)	0.680	2057.281
1	A5S		(calculated)	(calculated)	0.509	1112.116
1	WBON		(calculated)	(calculated)	Exit-only	Exit-only
2	A5114		(calculated)	(calculated)	0.569	1547.086
2	EBON		(calculated)	(calculated)	Exit-only	Exit-only
2	A5S		(calculated)	(calculated)	0.555	1370.930
2	EBOFF		(calculated)	(calculated)	0.498	1100.148
2	A5N		(calculated)	(calculated)	0.570	1490.932

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Junction	Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
1	A5N	None			
1	WBOFF	Percentage			92.00
1	A5S	Percentage			80.00
1	WBON	None			
2	A5114	Percentage			92.00
2	EBON	None			
2	A5S	None			
2	EBOFF	Percentage			75.00
2	A5N	Percentage			97.00

Entry Lane Analysis: Arm options

Junction	Arm	Lane Capacity Source	Traffic Considering Secondary Lanes (%)
1	A5N	Evenly split	10.00
1	WBOFF	Evenly split	10.00
1	A5S	Evenly split	10.00
1	WBON	Evenly split	10.00
2	A5114	Evenly split	10.00
2	EBON	Evenly split	10.00
2	A5S	Evenly split	10.00
2	EBOFF	Evenly split	10.00
2	A5N	Evenly split	10.00

Lanes

Junction	Arm	Lane Level	Lane	Has Limited Storage	Storage (PCU)	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	A5N	1	1		Infinity	0.00	99999.00
1	WBOFF	1	1	✓	7.00	0.00	99999.00
1	WBOFF	1	2	✓	7.00	0.00	99999.00
1	WBOFF	2	2		Infinity		
1	A5S	1	1		Infinity	0.00	99999.00
1	WBON	1	1		Infinity	0.00	99999.00
2	A5114	1	1	✓	9.00	0.00	99999.00
2	A5114	1	2	✓	9.00	0.00	99999.00
2	A5114	2	1		Infinity		
2	EBON	1	1		Infinity	0.00	99999.00
2	A5S	1	1		Infinity	0.00	99999.00
2	EBOFF	1	1		Infinity	0.00	99999.00
2	A5N	1	1	✓	8.00	0.00	99999.00
2	A5N	1	2	✓	8.00	0.00	99999.00
2	A5N	2	2		Infinity		

Entry Lane slope and intercept

Junction	Arm	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	A5N	(calculated)	(calculated)	0.547	1343.496
1	WBOFF	(calculated)	(calculated)	0.340	1028.641
1	WBOFF	(calculated)	(calculated)	0.340	1028.641
1	A5S	(calculated)	(calculated)	0.509	1112.116
1	WBON	(calculated)	(calculated)	Exit-only	Exit-only
2	A5114	(calculated)	(calculated)	0.285	773.543
2	A5114	(calculated)	(calculated)	0.285	773.543
2	EBON	(calculated)	(calculated)	Exit-only	Exit-only
2	A5S	(calculated)	(calculated)	0.555	1370.930
2	EBOFF	(calculated)	(calculated)	0.498	1100.148
2	A5N	(calculated)	(calculated)	0.285	745.466
2	A5N	(calculated)	(calculated)	0.285	745.466

Lane Movements

Junction	Arm	Lane Level	Lane	Arm			
				A5N	WBOFF	A5S	WBON
1	A5N	1	1	✓	✓	✓	✓
1	WBOFF	1	1			✓	✓
1	WBOFF	1	2	✓	✓		
1	WBOFF	2	2	✓	✓	✓	✓
1	A5S	1	1	✓	✓	✓	✓
1	WBON	1	1	✓	✓	✓	✓

Lane Movements

Junction	Arm	Lane Level	Lane	Arm				
				A5114	EBON	A5S	EBOFF	A5N
2	A5114	1	1		✓			
2	A5114	1	2	✓		✓	✓	✓
2	A5114	2	1	✓	✓	✓	✓	✓
2	EBON	1	1	✓	✓	✓	✓	✓
2	A5S	1	1	✓	✓	✓	✓	✓
2	EBOFF	1	1	✓	✓	✓	✓	✓
2	A5N	1	1	✓				
2	A5N	1	2		✓	✓	✓	✓
2	A5N	2	2	✓	✓	✓	✓	✓

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	A5N	Linked Arm		N/A	
1	WBOFF	ONE HOUR	✓	658.00	100.000
1	A5S	ONE HOUR	✓	373.00	100.000
1	WBON	Exit-only	✓	Exit-only	Exit-only
2	A5114	ONE HOUR	✓	676.00	100.000
2	EBON	Exit-only	✓	Exit-only	Exit-only
2	A5S	Linked Arm		N/A	
2	EBOFF	ONE HOUR	✓	316.00	100.000
2	A5N	ONE HOUR	✓	561.00	100.000

Linked Arm Data

Junction	Arm	From Junction ID	From Arm ID	Link Type	Flow Source	Uniform Flow (PCU/hr)	Flow Multiplier (%)	Internal Storage Space (PCU)
1	A5N	2	A5S	Simple (vertical queueing)	Normal	0.00	100.00	
2	A5S	1	A5N	Simple (vertical queueing)	Normal	0.00	100.00	

Direct/Resultant Flows

Direct Flows Data

Time Segment	Junction	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	1	A5N	0.00	0.00		
07:45-08:00	1	WBOFF	495.38	495.38		
07:45-08:00	1	A5S	280.81	280.81		
07:45-08:00	1	WBON	Exit-only	0.00		
08:00-08:15	1	A5N	0.00	0.00		
08:00-08:15	1	WBOFF	591.53	591.53		
08:00-08:15	1	A5S	335.32	335.32		
08:00-08:15	1	WBON	Exit-only	0.00		
08:15-08:30	1	A5N	0.00	0.00		
08:15-08:30	1	WBOFF	724.47	724.47		
08:15-08:30	1	A5S	410.68	410.68		
08:15-08:30	1	WBON	Exit-only	0.00		
08:30-08:45	1	A5N	0.00	0.00		
08:30-08:45	1	WBOFF	724.47	724.47		
08:30-08:45	1	A5S	410.68	410.68		
08:30-08:45	1	WBON	Exit-only	0.00		
08:45-09:00	1	A5N	0.00	0.00		
08:45-09:00	1	WBOFF	591.53	591.53		
08:45-09:00	1	A5S	335.32	335.32		
08:45-09:00	1	WBON	Exit-only	0.00		
09:00-09:15	1	A5N	0.00	0.00		
09:00-09:15	1	WBOFF	495.38	495.38		

09:00-09:15	1	A5S	280.81	280.81		
09:00-09:15	1	WBON	Exit-only	0.00		
07:45-08:00	2	A5114	508.93	508.93		
07:45-08:00	2	EBON	Exit-only	0.00		
07:45-08:00	2	A5S	0.00	0.00		
07:45-08:00	2	EBOFF	237.90	237.90		
07:45-08:00	2	A5N	422.35	422.35		
08:00-08:15	2	A5114	607.71	607.71		
08:00-08:15	2	EBON	Exit-only	0.00		
08:00-08:15	2	A5S	0.00	0.00		
08:00-08:15	2	EBOFF	284.08	284.08		
08:00-08:15	2	A5N	504.33	504.33		
08:15-08:30	2	A5114	744.29	744.29		
08:15-08:30	2	EBON	Exit-only	0.00		
08:15-08:30	2	A5S	0.00	0.00		
08:15-08:30	2	EBOFF	347.92	347.92		
08:15-08:30	2	A5N	617.67	617.67		
08:30-08:45	2	A5114	744.29	744.29		
08:30-08:45	2	EBON	Exit-only	0.00		
08:30-08:45	2	A5S	0.00	0.00		
08:30-08:45	2	EBOFF	347.92	347.92		
08:30-08:45	2	A5N	617.67	617.67		
08:45-09:00	2	A5114	607.71	607.71		
08:45-09:00	2	EBON	Exit-only	0.00		
08:45-09:00	2	A5S	0.00	0.00		
08:45-09:00	2	EBOFF	284.08	284.08		
08:45-09:00	2	A5N	504.33	504.33		
09:00-09:15	2	A5114	508.93	508.93		
09:00-09:15	2	EBON	Exit-only	0.00		

09:00-09:15	2	A5S	0.00	0.00		
09:00-09:15	2	EBOFF	237.90	237.90		
09:00-09:15	2	A5N	422.35	422.35		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.000	0.000	276.000	176.000
	WBOFF	652.000	0.000	6.000	0.000
	A5S	282.000	0.000	0.000	91.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.00	0.00	0.61	0.39
	WBOFF	0.99	0.00	0.01	0.00
	A5S	0.76	0.00	0.00	0.24
	WBON	0.25	0.25	0.25	0.25

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Counts / Proportions (PCU/hr) - Junction 2 (for whole period)

		To				
		A5114	EBON	A5S	EBOFF	A5N
From	A5114	0.000	339.000	275.000	0.000	62.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	690.000	24.000	0.000	0.000	220.000
	EBOFF	269.000	0.000	41.000	0.000	6.000
	A5N	149.000	283.000	129.000	0.000	0.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 2 (for whole period)

		To				
		A5114	EBON	A5S	EBOFF	A5N
From	A5114	0.00	0.50	0.41	0.00	0.09
	EBON	0.20	0.20	0.20	0.20	0.20
	A5S	0.74	0.03	0.00	0.00	0.24
	EBOFF	0.85	0.00	0.13	0.00	0.02
	A5N	0.27	0.50	0.23	0.00	0.00

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	1.000	1.000	1.000	1.000
	WBOFF	1.000	1.000	1.000	1.000
	A5S	1.000	1.000	1.000	1.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.0	0.0	0.0	0.0
	WBOFF	0.0	0.0	0.0	0.0
	A5S	0.0	0.0	0.0	0.0
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Average PCU Per Vehicle - Junction 2 (for whole period)

		To				
		A5114	EBON	A5S	EBOFF	A5N
From	A5114	1.000	1.000	1.000	1.000	1.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	1.000	1.000	1.000	1.000	1.000
	EBOFF	1.000	1.000	1.000	1.000	1.000
	A5N	1.000	1.000	1.000	1.000	1.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 2 (for whole period)

		To				
		A5114	EBON	A5S	EBOFF	A5N
From	A5114	0.0	0.0	0.0	0.0	0.0
	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	0.0	0.0	0.0	0.0	0.0
	EBOFF	0.0	0.0	0.0	0.0	0.0
	A5N	0.0	0.0	0.0	0.0	0.0

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Junction	Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)
1	A5N	1.33	0.21	1.29	A	406.99	610.49	11.60	1.14	0.13
1	WBOFF	92.98	21.07	52.93	F	603.31	904.97	657.88	43.62	7.31
1	A5S	43.84	5.23	15.96	E	342.99	514.48	200.87	23.43	2.23
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	13.34	2.92	8.43	B	619.65	929.47	154.52	9.97	1.72
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	3.91	1.10	3.00	A	849.20	1273.80	67.70	3.19	0.75
2	EBOFF	42.34	4.32	14.30	E	291.88	437.82	170.04	23.30	1.89
2	A5N	182.65	34.93	75.53	F	514.73	772.09	1185.79	92.15	13.18

Main Results for each time segment

Main results: (07:45-08:00)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	331.11	82.78	331.19	704.42	0.00	0.00	0.08	0.877	A
1	WBOFF	501.35	125.34	500.14	0.00	331.19	0.00	1.14	7.546	A
1	A5S	281.26	70.32	283.29	206.23	621.20	0.00	0.58	7.050	A
1	WBON	Exit-only	Exit-only	Exit-only	200.07	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	507.68	126.92	507.91	828.64	355.24	0.00	0.86	6.153	A
2	EBON	Exit-only	Exit-only	Exit-only	489.60	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	704.42	176.11	701.30	331.11	46.57	0.00	0.44	2.170	A
2	EBOFF	241.60	60.40	243.08	0.00	747.87	0.00	0.55	7.874	A
2	A5N	413.83	103.46	413.60	220.64	770.32	0.00	1.42	11.364	B

Main results: (08:00-08:15)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	398.72	99.68	396.93	840.70	0.00	0.00	0.12	1.065	A
1	WBOFF	584.19	146.05	585.44	0.00	396.93	0.00	2.62	14.698	B
1	A5S	339.70	84.93	341.65	250.23	735.26	0.00	1.32	12.811	B
1	WBON	Exit-only	Exit-only	Exit-only	236.21	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	606.28	151.57	605.86	1002.98	421.13	0.00	1.44	8.364	A
2	EBON	Exit-only	Exit-only	Exit-only	574.59	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	840.70	210.18	841.52	398.72	56.10	0.00	0.63	2.852	A
2	EBOFF	286.18	71.55	285.87	0.00	897.62	0.00	1.14	13.598	B
2	A5N	500.85	125.21	499.48	254.17	929.32	0.00	3.82	23.814	C

Main results: (08:15-08:30)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	470.44	117.61	471.61	983.38	0.00	0.12	0.17	1.331	A
1	WBOFF	721.37	180.34	692.21	0.00	471.61	2.62	14.19	51.460	F
1	A5S	406.69	101.67	402.16	296.56	862.99	1.32	4.63	33.681	D
1	WBON	Exit-only	Exit-only	Exit-only	281.77	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	738.54	184.64	738.85	1174.04	481.83	1.44	2.92	12.979	B
2	EBON	Exit-only	Exit-only	Exit-only	676.16	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	983.38	245.85	986.23	470.44	67.34	0.63	1.06	3.734	A
2	EBOFF	353.44	88.36	342.67	0.00	1053.57	1.14	3.83	33.011	D
2	A5N	615.50	153.87	562.49	305.54	1090.70	3.82	19.92	83.555	F

Main results: (08:30-08:45)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	478.75	119.69	476.53	1002.67	0.00	0.17	0.21	1.307	A
1	WBOFF	725.43	181.36	701.22	0.00	476.53	14.19	21.07	92.975	F
1	A5S	410.24	102.56	414.81	298.71	875.56	4.63	5.23	43.840	E
1	WBON	Exit-only	Exit-only	Exit-only	287.70	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	744.71	186.18	744.83	1182.16	484.33	2.92	2.73	13.339	B
2	EBON	Exit-only	Exit-only	Exit-only	685.37	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1002.67	250.67	1002.24	478.75	67.07	1.06	1.10	3.912	A
2	EBOFF	351.22	87.80	344.46	0.00	1069.30	3.83	4.32	42.341	E
2	A5N	623.54	155.88	566.00	309.80	1103.97	19.92	34.93	182.650	F

Main results: (08:45-09:00)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	422.30	105.58	423.40	867.17	0.00	0.21	0.13	1.150	A
1	WBOFF	594.77	148.69	609.80	0.00	423.40	21.07	5.59	59.049	F
1	A5S	339.12	84.78	339.62	267.05	769.77	5.23	1.52	22.858	C
1	WBON	Exit-only	Exit-only	Exit-only	242.23	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	611.52	152.88	611.98	1034.64	487.42	2.73	1.59	9.623	A
2	EBON	Exit-only	Exit-only	Exit-only	620.22	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	867.17	216.79	870.76	422.30	56.41	1.10	0.74	3.412	A
2	EBOFF	285.91	71.48	285.99	0.00	927.17	4.32	1.33	23.407	C
2	A5N	513.49	128.37	570.06	268.30	944.85	34.93	18.84	164.963	F

Main results: (09:00-09:15)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	340.64	85.16	341.46	696.85	0.00	0.13	0.07	0.951	A
1	WBOFF	492.77	123.19	493.58	0.00	341.46	5.59	1.11	12.357	B
1	A5S	280.91	70.23	281.77	211.82	618.97	1.52	0.58	8.384	A
1	WBON	Exit-only	Exit-only	Exit-only	203.89	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	509.16	127.29	509.24	829.73	372.06	1.59	0.91	6.738	A
2	EBON	Exit-only	Exit-only	Exit-only	493.47	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	696.85	174.21	696.07	340.64	46.65	0.74	0.43	2.368	A
2	EBOFF	232.93	58.23	236.92	0.00	742.72	1.33	0.52	9.299	A
2	A5N	421.17	105.29	434.91	214.70	764.93	18.84	2.54	45.322	E

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1.21	0.08	0.877	A	A
1	WBOFF	15.42	1.03	7.546	A	A
1	A5S	8.19	0.55	7.050	A	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	12.93	0.86	6.153	A	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	6.29	0.42	2.170	A	A
2	EBOFF	7.70	0.51	7.874	A	A
2	A5N	19.61	1.31	11.364	B	B

Queueing Delay results: (08:00-08:15)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1.76	0.12	1.065	A	A
1	WBOFF	35.45	2.36	14.698	B	B
1	A5S	17.67	1.18	12.811	B	B
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	21.07	1.40	8.364	A	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	9.84	0.66	2.852	A	A
2	EBOFF	15.90	1.06	13.598	B	B
2	A5N	48.50	3.23	23.814	C	C

Queueing Delay results: (08:15-08:30)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	2.62	0.17	1.331	A	A
1	WBOFF	142.32	9.49	51.460	F	D
1	A5S	55.10	3.67	33.681	D	C
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	39.88	2.66	12.979	B	B
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	15.10	1.01	3.734	A	A
2	EBOFF	45.68	3.05	33.011	D	C
2	A5N	184.21	12.28	83.555	F	F

Queueing Delay results: (08:30-08:45)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	2.59	0.17	1.307	A	A
1	WBOFF	264.81	17.65	92.975	F	F
1	A5S	74.47	4.96	43.840	E	D
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	41.25	2.75	13.339	B	B
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	16.28	1.09	3.912	A	A
2	EBOFF	60.59	4.04	42.341	E	D
2	A5N	414.40	27.63	182.650	F	F

Queueing Delay results: (08:45-09:00)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	2.02	0.13	1.150	A	A
1	WBOFF	169.87	11.32	59.049	F	E
1	A5S	35.13	2.34	22.858	C	C
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	24.73	1.65	9.623	A	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	12.98	0.87	3.412	A	A
2	EBOFF	30.53	2.04	23.407	C	C
2	A5N	401.07	26.74	164.963	F	F

Queueing Delay results: (09:00-09:15)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1.41	0.09	0.951	A	A
1	WBOFF	30.01	2.00	12.357	B	B
1	A5S	10.32	0.69	8.384	A	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	14.66	0.98	6.738	A	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	7.22	0.48	2.368	A	A
2	EBOFF	9.64	0.64	9.299	A	A
2	A5N	118.00	7.87	45.322	E	D

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.08	0.00	0.00	0.00	0.24
1	WBOFF	1.14	0.00	0.00	2.95	4.67
1	A5S	0.58	0.00	0.00	1.59	2.48
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	0.86	0.00	0.00	2.15	3.28
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.44	0.00	0.00	1.48	3.00
2	EBOFF	0.55	0.00	0.00	1.49	2.34
2	A5N	1.42	0.00	0.08	3.79	5.22

Queue Variation results: (08:00-08:15)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.12	0.00	0.00	0.00	0.64
1	WBOFF	2.62	0.00	0.83	6.38	8.97
1	A5S	1.32	0.00	0.00	3.52	5.20
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1.44	0.00	0.34	3.58	4.75
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.63	0.00	0.00	3.00	3.00
2	EBOFF	1.14	0.00	0.00	2.94	4.14
2	A5N	3.82	0.00	1.86	8.83	12.48

Queue Variation results: (08:15-08:30)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.17	0.00	0.00	0.10	0.94
1	WBOFF	14.19	0.00	11.20	29.93	35.79
1	A5S	4.63	0.00	2.53	11.36	15.32
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	2.92	0.00	1.60	6.63	8.43
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1.06	0.00	0.00	3.00	3.00
2	EBOFF	3.83	0.00	1.86	9.51	13.01
2	A5N	19.92	0.81	16.73	39.31	45.59

Queue Variation results: (08:30-08:45)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.21	0.00	0.00	0.38	1.29
1	WBOFF	21.07	0.10	17.46	43.94	52.93
1	A5S	5.23	0.00	3.00	12.45	15.96
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	2.73	0.00	1.44	6.14	7.87
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1.10	0.00	0.00	3.00	3.00
2	EBOFF	4.32	0.00	2.13	10.74	14.30
2	A5N	34.93	2.91	31.57	64.69	75.53

Queue Variation results: (08:45-09:00)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.13	0.00	0.00	0.00	0.70
1	WBOFF	5.59	0.00	1.74	15.24	24.54
1	A5S	1.52	0.00	0.01	3.92	5.75
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1.59	0.00	0.40	4.01	5.53
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.74	0.00	0.00	3.00	3.00
2	EBOFF	1.33	0.00	0.00	3.59	5.08
2	A5N	18.84	0.00	9.30	48.95	62.03

Queue Variation results: (09:00-09:15)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.07	0.00	0.00	0.00	0.04
1	WBOFF	1.11	0.00	0.00	2.96	4.30
1	A5S	0.58	0.00	0.00	1.68	2.75
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	0.91	0.00	0.00	2.26	3.29
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.43	0.00	0.00	1.49	3.00
2	EBOFF	0.52	0.00	0.00	1.48	2.26
2	A5N	2.54	0.00	0.38	5.40	8.92

Lane Results

Lanes: Main Results for each time segment

Main results: (07:45-08:00)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	331.11	82.78	331.19	1343.50	0.246	0.00	0.08	0.877	A
1	WBOFF	1	1	4.88	1.22	4.96	842.72	0.006	0.00	0.00	1.095	A
1	WBOFF	1	2	495.26	123.82	491.28	842.72	0.588	0.00	1.10	7.356	A
1	WBOFF	2	2	501.35	125.34	500.14			0.00	0.04	0.239	A
1	A5S	1	1	281.26	70.32	283.29	636.90	0.442	0.00	0.58	7.050	A
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	256.32	64.08	260.07	618.61	0.414	0.00	0.42	6.227	A
2	A5114	1	2	251.59	62.90	251.98	618.61	0.407	0.00	0.44	6.072	A
2	A5114	2	1	507.68	126.92	507.91			0.00	0.00	0.004	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	704.42	176.11	701.30	1345.07	0.524	0.00	0.44	2.170	A
2	EBOFF	1	1	241.60	60.40	243.08	546.00	0.442	0.00	0.55	7.874	A
2	A5N	1	1	108.33	27.08	107.35	510.01	0.212	0.00	0.16	5.106	A
2	A5N	1	2	305.27	76.32	306.21	510.01	0.599	0.00	1.23	13.287	B
2	A5N	2	2	413.83	103.46	413.60			0.00	0.03	0.242	A

Main results: (08:00-08:15)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	398.72	99.68	396.93	1343.50	0.297	0.08	0.12	1.065	A
1	WBOFF	1	1	6.09	1.52	6.05	822.15	0.007	0.00	0.00	1.184	A
1	WBOFF	1	2	579.35	144.84	582.51	822.15	0.705	1.10	2.22	12.859	B
1	WBOFF	2	2	584.19	146.05	585.44			0.04	0.40	1.894	A
1	A5S	1	1	339.70	84.93	341.65	590.48	0.575	0.58	1.32	12.811	B
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	304.02	76.01	301.64	601.36	0.506	0.42	0.74	8.383	A
2	A5114	1	2	301.83	75.46	306.64	601.36	0.502	0.44	0.69	8.302	A
2	A5114	2	1	606.28	151.57	605.86			0.00	0.01	0.020	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	840.70	210.18	841.52	1339.79	0.627	0.44	0.63	2.852	A
2	EBOFF	1	1	286.18	71.55	285.87	490.12	0.584	0.55	1.14	13.598	B
2	A5N	1	1	132.73	33.18	131.48	466.02	0.285	0.16	0.28	6.994	A
2	A5N	1	2	366.75	91.69	363.32	466.02	0.787	1.23	2.91	25.651	D
2	A5N	2	2	500.85	125.21	499.48			0.03	0.62	2.996	A

Main results: (08:15-08:30)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	470.44	117.61	471.61	1343.50	0.350	0.12	0.17	1.331	A
1	WBOFF	1	1	6.36	1.59	6.44	798.78	0.008	0.00	0.00	1.382	A
1	WBOFF	1	2	685.84	171.46	681.51	798.78	0.859	2.22	5.68	25.726	D
1	WBOFF	2	2	721.37	180.34	692.21			0.40	8.50	25.534	D
1	A5S	1	1	406.69	101.67	402.16	538.50	0.755	1.32	4.63	33.681	D
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	369.99	92.50	366.91	585.46	0.632	0.74	1.45	12.624	B
2	A5114	1	2	368.86	92.22	365.19	585.46	0.630	0.69	1.40	12.668	B
2	A5114	2	1	738.54	184.64	738.85			0.01	0.07	0.325	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	983.38	245.85	986.23	1333.54	0.737	0.63	1.06	3.734	A
2	EBOFF	1	1	353.44	88.36	342.67	431.92	0.818	1.14	3.83	33.011	D
2	A5N	1	1	148.46	37.11	150.80	421.38	0.352	0.28	0.48	11.003	B
2	A5N	1	2	414.03	103.51	414.38	421.38	0.983	2.91	6.88	50.951	F
2	A5N	2	2	615.50	153.87	562.49			0.62	12.56	42.141	E

Main results: (08:30-08:45)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	478.75	119.69	476.53	1343.50	0.356	0.17	0.21	1.307	A
1	WBOFF	1	1	6.25	1.56	6.21	797.24	0.008	0.00	0.00	1.281	A
1	WBOFF	1	2	694.98	173.74	691.54	797.24	0.872	5.68	6.12	30.590	D
1	WBOFF	2	2	725.43	181.36	701.22			8.50	14.95	62.520	F
1	A5S	1	1	410.24	102.56	414.81	533.38	0.769	4.63	5.23	43.840	E
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	372.84	93.21	372.92	584.80	0.638	1.45	1.31	12.821	B
2	A5114	1	2	371.98	93.00	373.94	584.80	0.636	1.40	1.35	13.143	B
2	A5114	2	1	744.71	186.18	744.83			0.07	0.07	0.359	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	1002.67	250.67	1002.24	1333.70	0.752	1.06	1.10	3.912	A
2	EBOFF	1	1	351.22	87.80	344.46	426.05	0.824	3.83	4.32	42.341	E
2	A5N	1	1	148.69	37.17	147.25	417.71	0.356	0.48	0.55	12.741	B
2	A5N	1	2	417.31	104.33	415.28	417.71	0.999	6.88	7.48	63.476	F
2	A5N	2	2	623.54	155.88	566.00			12.56	26.90	132.547	F

Main results: (08:45-09:00)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	422.30	105.58	423.40	1343.50	0.314	0.21	0.13	1.150	A
1	WBOFF	1	1	4.29	1.07	4.26	813.86	0.005	0.00	0.00	1.134	A
1	WBOFF	1	2	605.50	151.38	609.17	813.86	0.744	6.12	3.00	23.338	C
1	WBOFF	2	2	594.77	148.69	609.80			14.95	2.60	36.892	E
1	A5S	1	1	339.12	84.78	339.62	576.43	0.588	5.23	1.52	22.858	C
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	307.65	76.91	306.32	583.99	0.527	1.31	0.78	9.523	A
2	A5114	1	2	304.33	76.08	305.19	583.99	0.521	1.35	0.81	9.580	A
2	A5114	2	1	611.52	152.88	611.98			0.07	0.00	0.083	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	867.17	216.79	870.76	1339.61	0.647	1.10	0.74	3.412	A
2	EBOFF	1	1	285.91	71.48	285.99	479.09	0.597	4.32	1.33	23.407	C
2	A5N	1	1	153.34	38.33	150.29	461.72	0.332	0.55	0.44	11.010	B
2	A5N	1	2	416.72	104.18	426.91	461.72	0.903	7.48	5.38	55.024	F
2	A5N	2	2	513.49	128.37	570.06			26.90	13.02	123.242	F

Main results: (09:00-09:15)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	340.64	85.16	341.46	1343.50	0.254	0.13	0.07	0.951	A
1	WBOFF	1	1	4.61	1.15	4.53	839.50	0.005	0.00	0.00	1.181	A
1	WBOFF	1	2	488.98	122.24	484.80	839.50	0.582	3.00	1.05	9.721	A
1	WBOFF	2	2	492.77	123.19	493.58			2.60	0.06	3.197	A
1	A5S	1	1	280.91	70.23	281.77	637.80	0.440	1.52	0.58	8.384	A
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	253.62	63.41	253.00	614.21	0.413	0.78	0.45	6.728	A
2	A5114	1	2	255.61	63.90	255.69	614.21	0.416	0.81	0.47	6.738	A
2	A5114	2	1	509.16	127.29	509.24			0.00	0.00	0.007	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	696.85	174.21	696.07	1345.03	0.518	0.74	0.43	2.368	A
2	EBOFF	1	1	232.93	58.23	236.92	547.93	0.425	1.33	0.52	9.299	A
2	A5N	1	1	113.75	28.44	114.57	511.50	0.222	0.44	0.17	6.916	A
2	A5N	1	2	321.16	80.29	322.29	511.50	0.628	5.38	1.65	28.671	D
2	A5N	2	2	421.17	105.29	434.91			13.02	0.72	25.530	D

Lanes: Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	1.21	0.08	0.877	A	A
1	WBOFF	1	1	0.02	0.00	1.095	A	A
1	WBOFF	1	2	14.91	0.99	7.356	A	A
1	WBOFF	2	2	0.49	0.03	0.239	A	A
1	A5S	1	1	8.19	0.55	7.050	A	A
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	6.55	0.44	6.227	A	A
2	A5114	1	2	6.37	0.42	6.072	A	A
2	A5114	2	1	0.01	0.00	0.004	A	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	6.29	0.42	2.170	A	A
2	EBOFF	1	1	7.70	0.51	7.874	A	A
2	A5N	1	1	2.37	0.16	5.106	A	A
2	A5N	1	2	16.83	1.12	13.287	B	B
2	A5N	2	2	0.42	0.03	0.242	A	A

Queueing Delay results: (08:00-08:15)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	1.76	0.12	1.065	A	A
1	WBOFF	1	1	0.03	0.00	1.184	A	A
1	WBOFF	1	2	30.91	2.06	12.859	B	B
1	WBOFF	2	2	4.51	0.30	1.894	A	A
1	A5S	1	1	17.67	1.18	12.811	B	B
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	10.58	0.71	8.383	A	A
2	A5114	1	2	10.44	0.70	8.302	A	A
2	A5114	2	1	0.05	0.00	0.020	A	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	9.84	0.66	2.852	A	A
2	EBOFF	1	1	15.90	1.06	13.598	B	B
2	A5N	1	1	3.89	0.26	6.994	A	A
2	A5N	1	2	38.59	2.57	25.651	D	C
2	A5N	2	2	6.02	0.40	2.996	A	A

Queueing Delay results: (08:15-08:30)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	2.62	0.17	1.331	A	A
1	WBOFF	1	1	0.04	0.00	1.382	A	A
1	WBOFF	1	2	72.32	4.82	25.726	D	C
1	WBOFF	2	2	69.96	4.66	25.534	D	C
1	A5S	1	1	55.10	3.67	33.681	D	C
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	19.44	1.30	12.624	B	B
2	A5114	1	2	19.45	1.30	12.668	B	B
2	A5114	2	1	0.99	0.07	0.325	A	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	15.10	1.01	3.734	A	A
2	EBOFF	1	1	45.68	3.05	33.011	D	C
2	A5N	1	1	6.89	0.46	11.003	B	B
2	A5N	1	2	86.21	5.75	50.951	F	D
2	A5N	2	2	91.11	6.07	42.141	E	D

Queueing Delay results: (08:30-08:45)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	2.59	0.17	1.307	A	A
1	WBOFF	1	1	0.03	0.00	1.281	A	A
1	WBOFF	1	2	88.02	5.87	30.590	D	C
1	WBOFF	2	2	176.76	11.78	62.520	F	E
1	A5S	1	1	74.47	4.96	43.840	E	D
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	19.94	1.33	12.821	B	B
2	A5114	1	2	20.21	1.35	13.143	B	B
2	A5114	2	1	1.11	0.07	0.359	A	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	16.28	1.09	3.912	A	A
2	EBOFF	1	1	60.59	4.04	42.341	E	D
2	A5N	1	1	7.90	0.53	12.741	B	B
2	A5N	1	2	108.76	7.25	63.476	F	E
2	A5N	2	2	297.75	19.85	132.547	F	F

Queueing Delay results: (08:45-09:00)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	2.02	0.13	1.150	A	A
1	WBOFF	1	1	0.03	0.00	1.134	A	A
1	WBOFF	1	2	62.57	4.17	23.338	C	C
1	WBOFF	2	2	107.27	7.15	36.892	E	D
1	A5S	1	1	35.13	2.34	22.858	C	C
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	12.26	0.82	9.523	A	A
2	A5114	1	2	12.24	0.82	9.580	A	A
2	A5114	2	1	0.23	0.02	0.083	A	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	12.98	0.87	3.412	A	A
2	EBOFF	1	1	30.53	2.04	23.407	C	C
2	A5N	1	1	6.88	0.46	11.010	B	B
2	A5N	1	2	96.45	6.43	55.024	F	E
2	A5N	2	2	297.74	19.85	123.242	F	F

Queueing Delay results: (09:00-09:15)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	1.41	0.09	0.951	A	A
1	WBOFF	1	1	0.02	0.00	1.181	A	A
1	WBOFF	1	2	21.00	1.40	9.721	A	A
1	WBOFF	2	2	8.99	0.60	3.197	A	A
1	A5S	1	1	10.32	0.69	8.384	A	A
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	7.31	0.49	6.728	A	A
2	A5114	1	2	7.33	0.49	6.738	A	A
2	A5114	2	1	0.01	0.00	0.007	A	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	7.22	0.48	2.368	A	A
2	EBOFF	1	1	9.64	0.64	9.299	A	A
2	A5N	1	1	3.70	0.25	6.916	A	A
2	A5N	1	2	43.85	2.92	28.671	D	C
2	A5N	2	2	70.45	4.70	25.530	D	C

Lanes: Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.08	0.00	0.00	0.00	0.24
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	1.10	0.00	0.00	2.95	4.67
1	WBOFF	2	2	0.04	0.00	0.00	0.00	0.00
1	A5S	1	1	0.58	0.00	0.00	1.59	2.48
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	0.42	0.00	0.00	1.07	1.91
2	A5114	1	2	0.44	0.00	0.00	1.10	2.11
2	A5114	2	1	0.00	0.00	0.00	0.00	0.00
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.44	0.00	0.00	1.48	3.00
2	EBOFF	1	1	0.55	0.00	0.00	1.49	2.34
2	A5N	1	1	0.16	0.00	0.00	0.26	0.79
2	A5N	1	2	1.23	0.00	0.00	3.48	4.87
2	A5N	2	2	0.03	0.00	0.00	0.00	0.00

Queue Variation results: (08:00-08:15)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.12	0.00	0.00	0.00	0.64
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	2.22	0.00	0.83	7.00	7.00
1	WBOFF	2	2	0.40	0.00	0.00	0.00	1.97
1	A5S	1	1	1.32	0.00	0.00	3.52	5.20
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	0.74	0.00	0.00	2.06	3.21
2	A5114	1	2	0.69	0.00	0.00	1.85	2.94
2	A5114	2	1	0.01	0.00	0.00	0.00	0.00
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.63	0.00	0.00	3.00	3.00
2	EBOFF	1	1	1.14	0.00	0.00	2.94	4.14
2	A5N	1	1	0.28	0.00	0.00	0.73	1.35
2	A5N	1	2	2.91	0.00	1.58	8.00	8.00
2	A5N	2	2	0.62	0.00	0.00	0.48	4.13

Queue Variation results: (08:15-08:30)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.17	0.00	0.00	0.10	0.94
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	5.68	0.00	7.00	7.00	7.00
1	WBOFF	2	2	8.50	0.00	4.20	22.93	28.79
1	A5S	1	1	4.63	0.00	2.53	11.36	15.32
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	1.45	0.00	0.02	3.89	5.55
2	A5114	1	2	1.40	0.00	0.00	3.78	5.36
2	A5114	2	1	0.07	0.00	0.00	0.00	0.00
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	1.06	0.00	0.00	3.00	3.00
2	EBOFF	1	1	3.83	0.00	1.86	9.51	13.01
2	A5N	1	1	0.48	0.00	0.00	1.30	2.24
2	A5N	1	2	6.88	0.50	8.00	8.00	8.00
2	A5N	2	2	12.56	0.00	8.08	31.02	37.53

Queue Variation results: (08:30-08:45)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.21	0.00	0.00	0.38	1.29
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	6.12	0.10	7.00	7.00	7.00
1	WBOFF	2	2	14.95	0.00	10.46	36.94	45.93
1	A5S	1	1	5.23	0.00	3.00	12.45	15.96
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	1.31	0.00	0.00	3.53	5.04
2	A5114	1	2	1.35	0.00	0.00	3.72	5.19
2	A5114	2	1	0.07	0.00	0.00	0.00	0.00
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	1.10	0.00	0.00	3.00	3.00
2	EBOFF	1	1	4.32	0.00	2.13	10.74	14.30
2	A5N	1	1	0.55	0.00	0.00	1.56	2.62
2	A5N	1	2	7.48	2.66	8.00	8.00	8.00
2	A5N	2	2	26.90	0.00	22.90	56.48	67.19

Queue Variation results: (08:45-09:00)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.13	0.00	0.00	0.00	0.70
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	3.00	0.00	1.74	7.00	7.00
1	WBOFF	2	2	2.60	0.00	0.00	8.24	17.54
1	A5S	1	1	1.52	0.00	0.01	3.92	5.75
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	0.78	0.00	0.00	2.17	3.35
2	A5114	1	2	0.81	0.00	0.00	2.16	3.49
2	A5114	2	1	0.00	0.00	0.00	0.00	0.00
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.74	0.00	0.00	3.00	3.00
2	EBOFF	1	1	1.33	0.00	0.00	3.59	5.08
2	A5N	1	1	0.44	0.00	0.00	0.99	1.96
2	A5N	1	2	5.38	0.00	8.00	8.00	8.00
2	A5N	2	2	13.02	0.00	0.78	40.70	53.43

Queue Variation results: (09:00-09:15)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.07	0.00	0.00	0.00	0.04
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	1.05	0.00	0.00	2.96	4.30
1	WBOFF	2	2	0.06	0.00	0.00	0.00	0.00
1	A5S	1	1	0.58	0.00	0.00	1.68	2.75
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	0.45	0.00	0.00	1.23	2.03
2	A5114	1	2	0.47	0.00	0.00	1.27	1.99
2	A5114	2	1	0.00	0.00	0.00	0.00	0.00
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.43	0.00	0.00	1.49	3.00
2	EBOFF	1	1	0.52	0.00	0.00	1.48	2.26
2	A5N	1	1	0.17	0.00	0.00	0.29	0.87
2	A5N	1	2	1.65	0.00	0.11	5.13	8.00
2	A5N	2	2	0.72	0.00	0.00	0.00	0.82

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A55J6_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A55 J6\2018 DF
Report generation date: 14/06/2018 11:08:32

« (Default Analysis Set) - 2023 Base, PM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Direct/Resultant Flows
» Turning Proportions
» Vehicle Mix
» Results
» Lane Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 [Entry Lane Simulation] - 2023 Base			
Junction 1 - Arm A5N	0.33	1.76	N/A	A
Junction 1 - Arm WBOFF	7.98	41.73	N/A	E
Junction 1 - Arm A5S	3.40	31.23	N/A	D
Junction 2 - Arm A5114	33.91	96.24	N/A	F
Junction 2 - Arm A5S	0.91	3.62	N/A	A
Junction 2 - Arm EBOFF	1.25	17.98	N/A	C
Junction 2 - Arm A5N	0.77	8.27	N/A	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM" model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:15 - 17:45
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM " model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:15 - 17:45
"D7 - 2023 Base + Dev + Seasonality, AM Aug" model duration: 10:45 - 12:15
"D8 - 2023 Base + Dev + Seasonality, PM Aug" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 11:08:29

File summary

Title	(untitled)
Location	
Site Number	
Date	27/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	RogersA2
Description	

Analysis Options

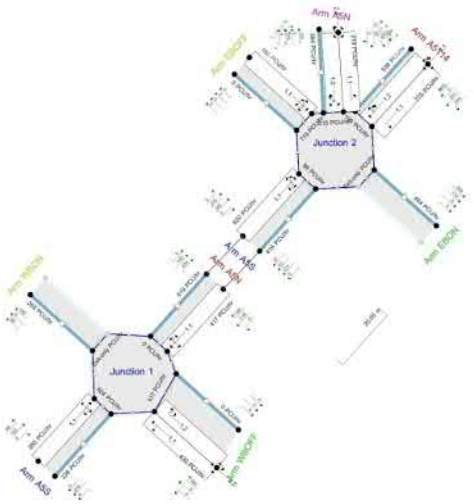
Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Entry Lane Analysis Options

Stop Criteria (%)	Random Seed	Results Refresh Speed (s)	Individual Vehicle Animation Number Of Trials	Time Step Size (s)	Last Run Random Seed	Last Run Number Of Trials
5.00	-1	3	1	10	801998892	855



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction 1 - Arm A5N	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Warning	Linked Roundabout	Junction 2 - Arm A5S	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	Entry Lane Simulation		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base, PM	2023 Base	PM		Varies by Arm	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	1	A55 J6 WB	Roundabout	A5N,WBOFF,A5S,WBON			24.35	C
2	2	A55 J6 EB	Roundabout	A5114,EBON,A5S,EBOFF,A5N			45.91	E

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description
1	A5N	A5N	(untitled)	
1	WBOFF	WBOFF	(untitled)	
1	A5S	A5S	(untitled)	
1	WBON	WBON	(untitled)	
2	A5114	A5114	(untitled)	
2	EBON	EBON	(untitled)	
2	A5S	A5S	(untitled)	
2	EBOFF	EBOFF	(untitled)	
2	A5N	A5N	(untitled)	

Capacity Options

Junction	Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	A5N	0.00	99999.00
1	WBOFF	0.00	99999.00
1	A5S	0.00	99999.00
1	WBON	0.00	99999.00
2	A5114	0.00	99999.00
2	EBON	0.00	99999.00
2	A5S	0.00	99999.00
2	EBOFF	0.00	99999.00
2	A5N	0.00	99999.00

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	A5N	3.50	6.40	4.90	19.50	47.00	34.00	
1	WBOFF	5.10	8.10	17.00	27.00	47.00	43.00	
1	A5S	3.00	4.00	6.00	18.00	47.00	27.00	
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	A5114	4.30	8.60	5.00	20.00	48.00	48.00	
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	A5S	3.50	6.40	4.90	18.00	48.00	27.00	
2	EBOFF	3.40	6.50	1.00	30.50	48.00	39.00	
2	A5N	5.00	10.00	0.10	21.00	48.00	37.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	A5N		(calculated)	(calculated)	0.547	1343.496
1	WBOFF		(calculated)	(calculated)	0.680	2057.281
1	A5S		(calculated)	(calculated)	0.509	1112.116
1	WBON		(calculated)	(calculated)	Exit-only	Exit-only
2	A5114		(calculated)	(calculated)	0.569	1547.086
2	EBON		(calculated)	(calculated)	Exit-only	Exit-only
2	A5S		(calculated)	(calculated)	0.555	1370.930
2	EBOFF		(calculated)	(calculated)	0.498	1100.148
2	A5N		(calculated)	(calculated)	0.570	1490.932

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Junction	Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
1	A5N	None			
1	WBOFF	Percentage			92.00
1	A5S	Percentage			80.00
1	WBON	None			
2	A5114	Percentage			92.00
2	EBON	None			
2	A5S	None			
2	EBOFF	Percentage			75.00
2	A5N	Percentage			97.00

Entry Lane Analysis: Arm options

Junction	Arm	Lane Capacity Source	Traffic Considering Secondary Lanes (%)
1	A5N	Evenly split	10.00
1	WBOFF	Evenly split	10.00
1	A5S	Evenly split	10.00
1	WBON	Evenly split	10.00
2	A5114	Evenly split	10.00
2	EBON	Evenly split	10.00
2	A5S	Evenly split	10.00
2	EBOFF	Evenly split	10.00
2	A5N	Evenly split	10.00

Lanes

Junction	Arm	Lane Level	Lane	Has Limited Storage	Storage (PCU)	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	A5N	1	1		Infinity	0.00	99999.00
1	WBOFF	1	1	✓	7.00	0.00	99999.00
1	WBOFF	1	2	✓	7.00	0.00	99999.00
1	WBOFF	2	2		Infinity		
1	A5S	1	1		Infinity	0.00	99999.00
1	WBON	1	1		Infinity	0.00	99999.00
2	A5114	1	1	✓	9.00	0.00	99999.00
2	A5114	1	2	✓	9.00	0.00	99999.00
2	A5114	2	1		Infinity		
2	EBON	1	1		Infinity	0.00	99999.00
2	A5S	1	1		Infinity	0.00	99999.00
2	EBOFF	1	1		Infinity	0.00	99999.00
2	A5N	1	1	✓	8.00	0.00	99999.00
2	A5N	1	2	✓	8.00	0.00	99999.00
2	A5N	2	2		Infinity		

Entry Lane slope and intercept

Junction	Arm	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	A5N	(calculated)	(calculated)	0.547	1343.496
1	WBOFF	(calculated)	(calculated)	0.340	1028.641
1	WBOFF	(calculated)	(calculated)	0.340	1028.641
1	A5S	(calculated)	(calculated)	0.509	1112.116
1	WBON	(calculated)	(calculated)	Exit-only	Exit-only
2	A5114	(calculated)	(calculated)	0.285	773.543
2	A5114	(calculated)	(calculated)	0.285	773.543
2	EBON	(calculated)	(calculated)	Exit-only	Exit-only
2	A5S	(calculated)	(calculated)	0.555	1370.930
2	EBOFF	(calculated)	(calculated)	0.498	1100.148
2	A5N	(calculated)	(calculated)	0.285	745.466
2	A5N	(calculated)	(calculated)	0.285	745.466

Lane Movements

Junction	Arm	Lane Level	Lane	Arm			
				A5N	WBOFF	A5S	WBON
1	A5N	1	1	✓	✓	✓	✓
1	WBOFF	1	1			✓	✓
1	WBOFF	1	2	✓	✓		
1	WBOFF	2	2	✓	✓	✓	✓
1	A5S	1	1	✓	✓	✓	✓
1	WBON	1	1	✓	✓	✓	✓

Lane Movements

Junction	Arm	Lane Level	Lane	Arm				
				A5114	EBON	A5S	EBOFF	A5N
2	A5114	1	1		✓			
2	A5114	1	2	✓		✓	✓	✓
2	A5114	2	1	✓	✓	✓	✓	✓
2	EBON	1	1	✓	✓	✓	✓	✓
2	A5S	1	1	✓	✓	✓	✓	✓
2	EBOFF	1	1	✓	✓	✓	✓	✓
2	A5N	1	1	✓				
2	A5N	1	2		✓	✓	✓	✓
2	A5N	2	2	✓	✓	✓	✓	✓

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	A5N	Linked Arm		N/A	
1	WBOFF	ONE HOUR	✓	574.00	100.000
1	A5S	ONE HOUR	✓	345.00	100.000
1	WBON	Exit-only	✓	Exit-only	Exit-only
2	A5114	ONE HOUR	✓	1030.00	100.000
2	EBON	Exit-only	✓	Exit-only	Exit-only
2	A5S	Linked Arm		N/A	
2	EBOFF	ONE HOUR	✓	239.00	100.000
2	A5N	ONE HOUR	✓	292.00	100.000

Linked Arm Data

Junction	Arm	From Junction ID	From Arm ID	Link Type	Flow Source	Uniform Flow (PCU/hr)	Flow Multiplier (%)	Internal Storage Space (PCU)
1	A5N	2	A5S	Simple (vertical queueing)	Normal	0.00	100.00	
2	A5S	1	A5N	Simple (vertical queueing)	Normal	0.00	100.00	

Direct/Resultant Flows

Direct Flows Data

Time Segment	Junction	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	1	A5N	0.00	0.00		
16:15-16:30	1	WBOFF	432.14	432.14		
16:15-16:30	1	A5S	259.73	259.73		
16:15-16:30	1	WBON	Exit-only	0.00		
16:30-16:45	1	A5N	0.00	0.00		
16:30-16:45	1	WBOFF	516.01	516.01		
16:30-16:45	1	A5S	310.15	310.15		
16:30-16:45	1	WBON	Exit-only	0.00		
16:45-17:00	1	A5N	0.00	0.00		
16:45-17:00	1	WBOFF	631.99	631.99		
16:45-17:00	1	A5S	379.85	379.85		
16:45-17:00	1	WBON	Exit-only	0.00		
17:00-17:15	1	A5N	0.00	0.00		
17:00-17:15	1	WBOFF	631.99	631.99		
17:00-17:15	1	A5S	379.85	379.85		
17:00-17:15	1	WBON	Exit-only	0.00		
17:15-17:30	1	A5N	0.00	0.00		
17:15-17:30	1	WBOFF	516.01	516.01		
17:15-17:30	1	A5S	310.15	310.15		
17:15-17:30	1	WBON	Exit-only	0.00		
17:30-17:45	1	A5N	0.00	0.00		
17:30-17:45	1	WBOFF	432.14	432.14		

17:30-17:45	1	A5S	259.73	259.73		
17:30-17:45	1	WBON	Exit-only	0.00		
16:15-16:30	2	A5114	775.44	775.44		
16:15-16:30	2	EBON	Exit-only	0.00		
16:15-16:30	2	A5S	0.00	0.00		
16:15-16:30	2	EBOFF	179.93	179.93		
16:15-16:30	2	A5N	219.83	219.83		
16:30-16:45	2	A5114	925.95	925.95		
16:30-16:45	2	EBON	Exit-only	0.00		
16:30-16:45	2	A5S	0.00	0.00		
16:30-16:45	2	EBOFF	214.86	214.86		
16:30-16:45	2	A5N	262.50	262.50		
16:45-17:00	2	A5114	1134.05	1134.05		
16:45-17:00	2	EBON	Exit-only	0.00		
16:45-17:00	2	A5S	0.00	0.00		
16:45-17:00	2	EBOFF	263.14	263.14		
16:45-17:00	2	A5N	321.50	321.50		
17:00-17:15	2	A5114	1134.05	1134.05		
17:00-17:15	2	EBON	Exit-only	0.00		
17:00-17:15	2	A5S	0.00	0.00		
17:00-17:15	2	EBOFF	263.14	263.14		
17:00-17:15	2	A5N	321.50	321.50		
17:15-17:30	2	A5114	925.95	925.95		
17:15-17:30	2	EBON	Exit-only	0.00		
17:15-17:30	2	A5S	0.00	0.00		
17:15-17:30	2	EBOFF	214.86	214.86		
17:15-17:30	2	A5N	262.50	262.50		
17:30-17:45	2	A5114	775.44	775.44		
17:30-17:45	2	EBON	Exit-only	0.00		

17:30-17:45	2	A5S	0.00	0.00		
17:30-17:45	2	EBOFF	179.93	179.93		
17:30-17:45	2	A5N	219.83	219.83		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.000	0.000	295.000	272.000
	WBOFF	565.000	0.000	9.000	0.000
	A5S	257.000	0.000	0.000	88.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.00	0.00	0.52	0.48
	WBOFF	0.98	0.00	0.02	0.00
	A5S	0.74	0.00	0.00	0.26
	WBON	0.25	0.25	0.25	0.25

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Counts / Proportions (PCU/hr) - Junction 2 (for whole period)

		To				
		A5114	EBON	A5S	EBOFF	A5N
From	A5114	0.000	465.000	438.000	0.000	127.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	473.000	5.000	0.000	0.000	375.000
	EBOFF	180.000	0.000	48.000	0.000	11.000
	A5N	76.000	152.000	64.000	0.000	0.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 2 (for whole period)

		To				
		A5114	EBON	A5S	EBOFF	A5N
From	A5114	0.00	0.45	0.43	0.00	0.12
	EBON	0.20	0.20	0.20	0.20	0.20
	A5S	0.55	0.01	0.00	0.00	0.44
	EBOFF	0.75	0.00	0.20	0.00	0.05
	A5N	0.26	0.52	0.22	0.00	0.00

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	1.000	1.000	1.000	1.000
	WBOFF	1.000	1.000	1.000	1.000
	A5S	1.000	1.000	1.000	1.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.0	0.0	0.0	0.0
	WBOFF	0.0	0.0	0.0	0.0
	A5S	0.0	0.0	0.0	0.0
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Average PCU Per Vehicle - Junction 2 (for whole period)

		To				
		A5114	EBON	A5S	EBOFF	A5N
From	A5114	1.000	1.000	1.000	1.000	1.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	1.000	1.000	1.000	1.000	1.000
	EBOFF	1.000	1.000	1.000	1.000	1.000
	A5N	1.000	1.000	1.000	1.000	1.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 2 (for whole period)

		To				
		A5114	EBON	A5S	EBOFF	A5N
From	A5114	0.0	0.0	0.0	0.0	0.0
	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	0.0	0.0	0.0	0.0	0.0
	EBOFF	0.0	0.0	0.0	0.0	0.0
	A5N	0.0	0.0	0.0	0.0	0.0

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Junction	Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)
1	A5N	1.76	0.33	1.83	A	503.63	755.44	18.61	1.48	0.21
1	WBOFF	41.73	7.98	25.33	E	529.01	793.51	277.01	20.95	3.08
1	A5S	31.23	3.40	11.33	D	317.42	476.12	139.01	17.52	1.54
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	96.24	33.91	85.13	F	953.60	1430.40	1113.07	46.69	12.37
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	3.62	0.91	3.00	A	751.32	1126.98	53.53	2.85	0.59
2	EBOFF	17.98	1.25	4.90	C	220.06	330.09	63.36	11.52	0.70
2	A5N	8.27	0.77	2.84	A	268.11	402.16	43.17	6.44	0.48

Main Results for each time segment

Main results: (16:15-16:30)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	416.42	104.11	417.19	618.81	0.00	0.00	0.10	1.097	A
1	WBOFF	430.11	107.53	430.11	0.00	417.19	0.00	0.75	6.120	A
1	A5S	261.75	65.44	260.49	225.68	623.58	0.00	0.49	6.435	A
1	WBON	Exit-only	Exit-only	Exit-only	265.26	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	775.86	193.96	774.60	535.86	198.53	0.00	2.20	9.983	A
2	EBON	Exit-only	Exit-only	Exit-only	463.79	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	618.81	154.70	620.14	416.42	98.88	0.00	0.34	1.972	A
2	EBOFF	177.54	44.39	179.93	0.00	719.02	0.00	0.28	5.721	A
2	A5N	219.37	54.84	219.37	383.65	515.30	0.00	0.30	4.464	A

Main results: (16:30-16:45)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	498.39	124.60	496.35	744.56	0.00	0.00	0.22	1.372	A
1	WBOFF	527.86	131.96	526.11	0.00	496.35	0.00	1.80	10.911	B
1	A5S	308.35	77.09	314.32	259.09	753.75	0.00	0.90	11.098	B
1	WBON	Exit-only	Exit-only	Exit-only	323.51	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	936.21	234.05	937.75	643.79	242.46	0.00	5.04	18.039	C
2	EBON	Exit-only	Exit-only	Exit-only	566.32	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	744.56	186.14	741.33	498.39	112.77	0.00	0.57	2.578	A
2	EBOFF	213.89	53.47	215.30	0.00	854.11	0.00	0.50	8.749	A
2	A5N	262.53	65.63	262.53	444.84	624.56	0.00	0.40	5.724	A

Main results: (16:45-17:00)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	582.32	145.58	584.84	901.19	0.00	0.22	0.25	1.683	A
1	WBOFF	635.02	158.75	628.42	0.00	584.84	1.80	6.84	29.941	D
1	A5S	384.49	96.12	383.23	314.04	897.19	0.90	3.10	25.583	D
1	WBON	Exit-only	Exit-only	Exit-only	379.23	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1145.89	286.47	1100.28	779.79	293.26	5.04	23.83	54.100	F
2	EBON	Exit-only	Exit-only	Exit-only	661.96	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	901.19	225.30	898.39	582.32	138.46	0.57	0.90	3.402	A
2	EBOFF	262.74	65.68	266.88	0.00	1036.84	0.50	1.25	16.098	C
2	A5N	322.60	80.65	322.25	550.60	753.12	0.40	0.76	8.158	A

Main results: (17:00-17:15)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	594.95	148.74	592.84	892.49	0.00	0.25	0.33	1.759	A
1	WBOFF	635.51	158.88	626.67	0.00	592.84	6.84	7.98	41.730	E
1	A5S	382.46	95.61	375.37	316.63	900.63	3.10	3.40	31.232	D
1	WBON	Exit-only	Exit-only	Exit-only	383.51	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1143.58	285.89	1098.60	785.40	305.82	23.83	33.91	96.242	F
2	EBON	Exit-only	Exit-only	Exit-only	664.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	892.49	223.12	892.70	594.95	138.04	0.90	0.91	3.624	A
2	EBOFF	266.32	66.58	270.04	0.00	1030.74	1.25	1.23	17.979	C
2	A5N	328.70	82.18	328.63	537.82	762.95	0.76	0.77	8.274	A

Main results: (17:15-17:30)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	519.23	129.81	517.19	729.61	0.00	0.33	0.21	1.581	A
1	WBOFF	509.68	127.42	510.39	0.00	517.19	7.98	1.82	19.304	C
1	A5S	305.89	76.47	301.26	276.84	752.70	3.40	1.11	15.680	C
1	WBON	Exit-only	Exit-only	Exit-only	324.35	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	947.58	236.89	967.51	634.11	238.95	33.91	10.68	64.246	F
2	EBON	Exit-only	Exit-only	Exit-only	574.95	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	729.61	182.40	735.79	519.23	121.96	0.91	0.49	2.879	A
2	EBOFF	216.70	54.18	215.93	0.00	857.75	1.23	0.53	10.056	B
2	A5N	255.23	63.81	255.23	457.61	616.07	0.77	0.39	6.033	A

Main results: (17:30-17:45)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	410.46	102.61	410.32	621.26	0.00	0.21	0.11	1.164	A
1	WBOFF	435.86	108.96	435.65	0.00	410.32	1.82	0.78	6.798	A
1	A5S	261.54	65.39	263.16	218.04	625.12	1.11	0.49	6.977	A
1	WBON	Exit-only	Exit-only	Exit-only	267.02	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	772.49	193.12	773.19	540.84	201.26	10.68	2.32	15.838	C
2	EBON	Exit-only	Exit-only	Exit-only	467.51	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	621.26	155.32	619.30	410.46	97.89	0.49	0.35	2.023	A
2	EBOFF	183.16	45.79	184.35	0.00	717.19	0.53	0.29	6.335	A
2	A5N	220.21	55.05	220.21	378.67	522.88	0.39	0.26	4.506	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1.87	0.12	1.097	A	A
1	WBOFF	10.92	0.73	6.120	A	A
1	A5S	6.93	0.46	6.435	A	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	31.80	2.12	9.983	A	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	5.05	0.34	1.972	A	A
2	EBOFF	4.28	0.29	5.721	A	A
2	A5N	4.05	0.27	4.464	A	A

Queueing Delay results: (16:30-16:45)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	2.80	0.19	1.372	A	A
1	WBOFF	23.25	1.55	10.911	B	B
1	A5S	14.28	0.95	11.098	B	B
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	68.34	4.56	18.039	C	B
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	7.90	0.53	2.578	A	A
2	EBOFF	7.74	0.52	8.749	A	A
2	A5N	6.25	0.42	5.724	A	A

Queueing Delay results: (16:45-17:00)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	4.01	0.27	1.683	A	A
1	WBOFF	75.37	5.02	29.941	D	C
1	A5S	39.01	2.60	25.583	D	C
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	234.69	15.65	54.100	F	D
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	12.44	0.83	3.402	A	A
2	EBOFF	17.35	1.16	16.098	C	B
2	A5N	10.82	0.72	8.158	A	A

Queueing Delay results: (17:00-17:15)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	4.30	0.29	1.759	A	A
1	WBOFF	108.28	7.22	41.730	E	D
1	A5S	48.84	3.26	31.232	D	C
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	431.59	28.77	96.242	F	F
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	13.56	0.90	3.624	A	A
2	EBOFF	19.84	1.32	17.979	C	B
2	A5N	11.14	0.74	8.274	A	A

Queueing Delay results: (17:15-17:30)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	3.54	0.24	1.581	A	A
1	WBOFF	46.44	3.10	19.304	C	B
1	A5S	22.09	1.47	15.680	C	B
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	286.16	19.08	64.246	F	E
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	9.24	0.62	2.879	A	A
2	EBOFF	9.23	0.62	10.056	B	B
2	A5N	6.70	0.45	6.033	A	A

Queueing Delay results: (17:30-17:45)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	2.10	0.14	1.164	A	A
1	WBOFF	12.76	0.85	6.798	A	A
1	A5S	7.87	0.52	6.977	A	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	60.49	4.03	15.838	C	B
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	5.33	0.36	2.023	A	A
2	EBOFF	4.93	0.33	6.335	A	A
2	A5N	4.21	0.28	4.506	A	A

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.10	0.00	0.00	0.00	0.44
1	WBOFF	0.75	0.00	0.00	2.07	3.33
1	A5S	0.49	0.00	0.00	1.36	2.13
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	2.20	0.00	0.76	5.38	7.30
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.34	0.00	0.00	0.94	1.96
2	EBOFF	0.28	0.00	0.00	0.70	1.37
2	A5N	0.30	0.00	0.00	0.77	1.32

Queue Variation results: (16:30-16:45)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.22	0.00	0.00	0.46	1.33
1	WBOFF	1.80	0.00	0.17	5.08	6.51
1	A5S	0.90	0.00	0.00	2.42	3.45
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	5.04	0.00	2.88	11.46	15.83
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.57	0.00	0.00	1.95	3.00
2	EBOFF	0.50	0.00	0.00	1.34	2.14
2	A5N	0.40	0.00	0.00	0.97	1.68

Queue Variation results: (16:45-17:00)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.25	0.00	0.00	0.63	1.47
1	WBOFF	6.84	0.00	4.33	15.79	20.33
1	A5S	3.10	0.00	1.34	7.98	10.75
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	23.83	1.57	19.59	48.64	57.25
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.90	0.00	0.00	3.00	3.00
2	EBOFF	1.25	0.00	0.00	3.22	4.90
2	A5N	0.76	0.00	0.00	1.85	2.84

Queue Variation results: (17:00-17:15)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.33	0.00	0.00	0.93	1.83
1	WBOFF	7.98	0.00	4.66	19.85	25.33
1	A5S	3.40	0.00	1.34	9.13	11.33
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	33.91	2.60	29.03	66.83	85.13
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.91	0.00	0.00	3.00	3.00
2	EBOFF	1.23	0.00	0.00	3.38	4.77
2	A5N	0.77	0.00	0.00	1.92	2.77

Queue Variation results: (17:15-17:30)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.21	0.00	0.00	0.38	1.32
1	WBOFF	1.82	0.00	0.00	5.23	7.22
1	A5S	1.11	0.00	0.00	2.89	3.93
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	10.68	0.00	4.64	28.50	45.63
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.49	0.00	0.00	1.58	3.00
2	EBOFF	0.53	0.00	0.00	1.38	2.06
2	A5N	0.39	0.00	0.00	0.92	1.72

Queue Variation results: (17:30-17:45)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.11	0.00	0.00	0.00	0.54
1	WBOFF	0.78	0.00	0.00	2.29	3.72
1	A5S	0.49	0.00	0.00	1.39	2.46
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	2.32	0.00	0.87	5.37	7.25
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.35	0.00	0.00	0.98	3.00
2	EBOFF	0.29	0.00	0.00	0.70	1.38
2	A5N	0.26	0.00	0.00	0.65	1.01

Lane Results

Lanes: Main Results for each time segment

Main results: (16:15-16:30)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	416.42	104.11	417.19	1343.50	0.310	0.00	0.10	1.097	A
1	WBOFF	1	1	6.32	1.58	6.25	815.81	0.008	0.00	0.00	1.149	A
1	WBOFF	1	2	423.79	105.95	425.82	815.81	0.519	0.00	0.74	6.073	A
1	WBOFF	2	2	430.11	107.53	430.11			0.00	0.01	0.115	A
1	A5S	1	1	261.75	65.44	260.49	635.93	0.412	0.00	0.49	6.435	A
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	343.79	85.95	349.47	659.66	0.521	0.00	0.72	7.944	A
2	A5114	1	2	430.81	107.70	431.09	659.66	0.653	0.00	1.41	11.336	B
2	A5114	2	1	775.86	193.96	774.60			0.00	0.07	0.176	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	618.81	154.70	620.14	1316.03	0.470	0.00	0.34	1.972	A
2	EBOFF	1	1	177.54	44.39	179.93	556.77	0.319	0.00	0.28	5.721	A
2	A5N	1	1	60.07	15.02	59.65	580.55	0.103	0.00	0.06	3.262	A
2	A5N	1	2	159.30	39.82	159.44	580.55	0.274	0.00	0.24	4.881	A
2	A5N	2	2	219.37	54.84	219.37			0.00	0.00	0.000	A

Main results: (16:30-16:45)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	498.39	124.60	496.35	1343.50	0.371	0.10	0.22	1.372	A
1	WBOFF	1	1	5.75	1.44	5.96	791.04	0.007	0.00	0.00	1.344	A
1	WBOFF	1	2	520.35	130.09	510.53	791.04	0.658	0.74	1.68	10.307	B
1	WBOFF	2	2	527.86	131.96	526.11			0.01	0.12	0.723	A
1	A5S	1	1	308.35	77.09	314.32	582.95	0.529	0.49	0.90	11.098	B
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	425.82	106.46	425.33	648.15	0.657	0.72	1.50	11.811	B
2	A5114	1	2	511.93	127.98	509.68	648.15	0.790	1.41	2.81	19.045	C
2	A5114	2	1	936.21	234.05	937.75			0.07	0.74	2.205	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	744.56	186.14	741.33	1308.32	0.569	0.34	0.57	2.578	A
2	EBOFF	1	1	213.89	53.47	215.30	506.36	0.422	0.28	0.50	8.749	A
2	A5N	1	1	67.58	16.89	67.37	550.33	0.123	0.06	0.07	3.825	A
2	A5N	1	2	194.95	48.74	194.32	550.33	0.354	0.24	0.33	6.381	A
2	A5N	2	2	262.53	65.63	262.53			0.00	0.00	0.001	A

Main results: (16:45-17:00)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	582.32	145.58	584.84	1343.50	0.433	0.22	0.25	1.683	A
1	WBOFF	1	1	11.16	2.79	10.60	763.35	0.015	0.00	0.01	1.514	A
1	WBOFF	1	2	617.26	154.32	615.79	763.35	0.809	1.68	4.15	20.761	C
1	WBOFF	2	2	635.02	158.75	628.42			0.12	2.68	9.248	A
1	A5S	1	1	384.49	96.12	383.23	524.58	0.733	0.90	3.10	25.583	D
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	489.61	122.40	492.42	634.85	0.771	1.50	3.29	21.052	C
2	A5114	1	2	610.67	152.67	597.05	634.85	0.962	2.81	6.85	34.852	D
2	A5114	2	1	1145.89	286.47	1100.28			0.74	13.69	25.034	D
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	901.19	225.30	898.39	1294.06	0.696	0.57	0.90	3.402	A
2	EBOFF	1	1	262.74	65.68	266.88	438.16	0.600	0.50	1.25	16.098	C
2	A5N	1	1	86.39	21.60	86.46	514.76	0.168	0.07	0.11	4.572	A
2	A5N	1	2	235.86	58.96	233.47	514.76	0.458	0.33	0.64	9.398	A
2	A5N	2	2	322.60	80.65	322.25			0.00	0.01	0.021	A

Main results: (17:00-17:15)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	594.95	148.74	592.84	1343.50	0.443	0.25	0.33	1.759	A
1	WBOFF	1	1	11.58	2.89	11.44	760.84	0.015	0.01	0.00	1.445	A
1	WBOFF	1	2	615.09	153.77	612.98	760.84	0.808	4.15	4.35	24.233	C
1	WBOFF	2	2	635.51	158.88	626.67			2.68	3.63	17.777	C
1	A5S	1	1	382.46	95.61	375.37	523.18	0.731	3.10	3.40	31.232	D
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	497.47	124.37	486.95	631.56	0.788	3.29	3.70	25.490	D
2	A5114	1	2	601.12	150.28	604.21	631.56	0.952	6.85	7.07	41.289	E
2	A5114	2	1	1143.58	285.89	1098.60			13.69	23.14	61.945	F
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	892.49	223.12	892.70	1294.29	0.690	0.90	0.91	3.624	A
2	EBOFF	1	1	266.32	66.58	270.04	440.44	0.605	1.25	1.23	17.979	C
2	A5N	1	1	81.26	20.32	80.77	512.04	0.159	0.11	0.13	4.726	A
2	A5N	1	2	247.37	61.84	247.51	512.04	0.483	0.64	0.65	9.502	A
2	A5N	2	2	328.70	82.18	328.63			0.01	0.00	0.023	A

Main results: (17:15-17:30)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	519.23	129.81	517.19	1343.50	0.386	0.33	0.21	1.581	A
1	WBOFF	1	1	6.53	1.63	6.60	784.51	0.008	0.00	0.00	1.425	A
1	WBOFF	1	2	503.86	125.96	505.75	784.51	0.642	4.35	1.64	14.767	B
1	WBOFF	2	2	509.68	127.42	510.39			3.63	0.18	5.328	A
1	A5S	1	1	305.89	76.47	301.26	583.38	0.524	3.40	1.11	15.680	C
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	431.09	107.77	434.53	649.07	0.664	3.70	1.83	19.737	C
2	A5114	1	2	536.42	134.11	542.67	649.07	0.826	7.07	3.92	32.662	D
2	A5114	2	1	947.58	236.89	967.51			23.14	4.94	38.398	E
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	729.61	182.40	735.79	1303.22	0.560	0.91	0.49	2.879	A
2	EBOFF	1	1	216.70	54.18	215.93	505.00	0.429	1.23	0.53	10.056	B
2	A5N	1	1	65.75	16.44	66.04	552.68	0.119	0.13	0.08	3.910	A
2	A5N	1	2	189.47	47.37	190.95	552.68	0.343	0.65	0.31	6.764	A
2	A5N	2	2	255.23	63.81	255.23			0.00	0.00	0.004	A

Main results: (17:30-17:45)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	410.46	102.61	410.32	1343.50	0.306	0.21	0.11	1.164	A
1	WBOFF	1	1	8.00	2.00	8.21	817.96	0.010	0.00	0.00	1.131	A
1	WBOFF	1	2	427.65	106.91	424.63	817.96	0.523	1.64	0.78	6.729	A
1	WBOFF	2	2	435.86	108.96	435.65			0.18	0.01	0.205	A
1	A5S	1	1	261.54	65.39	263.16	635.30	0.412	1.11	0.49	6.977	A
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	351.44	87.86	349.54	658.94	0.533	1.83	0.79	9.557	A
2	A5114	1	2	421.75	105.44	425.05	658.94	0.640	3.92	1.45	15.020	C
2	A5114	2	1	772.49	193.12	773.19			4.94	0.08	3.874	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	621.26	155.32	619.30	1316.58	0.472	0.49	0.35	2.023	A
2	EBOFF	1	1	183.16	45.79	184.35	557.45	0.329	0.53	0.29	6.335	A
2	A5N	1	1	56.28	14.07	56.77	578.46	0.097	0.08	0.04	3.218	A
2	A5N	1	2	163.93	40.98	162.46	578.46	0.283	0.31	0.22	4.966	A
2	A5N	2	2	220.21	55.05	220.21			0.00	0.00	0.000	A

Lanes: Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	1.87	0.12	1.097	A	A
1	WBOFF	1	1	0.03	0.00	1.149	A	A
1	WBOFF	1	2	10.69	0.71	6.073	A	A
1	WBOFF	2	2	0.20	0.01	0.115	A	A
1	A5S	1	1	6.93	0.46	6.435	A	A
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	11.54	0.77	7.944	A	A
2	A5114	1	2	19.73	1.32	11.336	B	B
2	A5114	2	1	0.53	0.04	0.176	A	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	5.05	0.34	1.972	A	A
2	EBOFF	1	1	4.28	0.29	5.721	A	A
2	A5N	1	1	0.76	0.05	3.262	A	A
2	A5N	1	2	3.29	0.22	4.881	A	A
2	A5N	2	2	0.00	0.00	0.000	A	A

Queueing Delay results: (16:30-16:45)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	2.80	0.19	1.372	A	A
1	WBOFF	1	1	0.05	0.00	1.344	A	A
1	WBOFF	1	2	21.67	1.44	10.307	B	B
1	WBOFF	2	2	1.53	0.10	0.723	A	A
1	A5S	1	1	14.28	0.95	11.098	B	B
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	20.36	1.36	11.811	B	B
2	A5114	1	2	39.67	2.64	19.045	C	B
2	A5114	2	1	8.31	0.55	2.205	A	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	7.90	0.53	2.578	A	A
2	EBOFF	1	1	7.74	0.52	8.749	A	A
2	A5N	1	1	1.08	0.07	3.825	A	A
2	A5N	1	2	5.17	0.34	6.381	A	A
2	A5N	2	2	0.00	0.00	0.001	A	A

Queueing Delay results: (16:45-17:00)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	4.01	0.27	1.683	A	A
1	WBOFF	1	1	0.06	0.00	1.514	A	A
1	WBOFF	1	2	52.26	3.48	20.761	C	C
1	WBOFF	2	2	23.05	1.54	9.248	A	A
1	A5S	1	1	39.01	2.60	25.583	D	C
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	42.23	2.82	21.052	C	C
2	A5114	1	2	84.85	5.66	34.852	D	C
2	A5114	2	1	107.61	7.17	25.034	D	C
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	12.44	0.83	3.402	A	A
2	EBOFF	1	1	17.35	1.16	16.098	C	B
2	A5N	1	1	1.60	0.11	4.572	A	A
2	A5N	1	2	9.19	0.61	9.398	A	A
2	A5N	2	2	0.03	0.00	0.021	A	A

Queueing Delay results: (17:00-17:15)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	4.30	0.29	1.759	A	A
1	WBOFF	1	1	0.06	0.00	1.445	A	A
1	WBOFF	1	2	62.35	4.16	24.233	C	C
1	WBOFF	2	2	45.86	3.06	17.777	C	B
1	A5S	1	1	48.84	3.26	31.232	D	C
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	52.62	3.51	25.490	D	C
2	A5114	1	2	103.13	6.88	41.289	E	D
2	A5114	2	1	275.84	18.39	61.945	F	E
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	13.56	0.90	3.624	A	A
2	EBOFF	1	1	19.84	1.32	17.979	C	B
2	A5N	1	1	1.66	0.11	4.726	A	A
2	A5N	1	2	9.45	0.63	9.502	A	A
2	A5N	2	2	0.03	0.00	0.023	A	A

Queueing Delay results: (17:15-17:30)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	3.54	0.24	1.581	A	A
1	WBOFF	1	1	0.05	0.00	1.425	A	A
1	WBOFF	1	2	32.74	2.18	14.767	B	B
1	WBOFF	2	2	13.65	0.91	5.328	A	A
1	A5S	1	1	22.09	1.47	15.680	C	B
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	37.93	2.53	19.737	C	B
2	A5114	1	2	76.09	5.07	32.662	D	C
2	A5114	2	1	172.15	11.48	38.398	E	D
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	9.24	0.62	2.879	A	A
2	EBOFF	1	1	9.23	0.62	10.056	B	B
2	A5N	1	1	1.11	0.07	3.910	A	A
2	A5N	1	2	5.59	0.37	6.764	A	A
2	A5N	2	2	0.00	0.00	0.004	A	A

Queueing Delay results: (17:30-17:45)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	2.10	0.14	1.164	A	A
1	WBOFF	1	1	0.03	0.00	1.131	A	A
1	WBOFF	1	2	12.32	0.82	6.729	A	A
1	WBOFF	2	2	0.41	0.03	0.205	A	A
1	A5S	1	1	7.87	0.52	6.977	A	A
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	14.81	0.99	9.557	A	A
2	A5114	1	2	28.45	1.90	15.020	C	B
2	A5114	2	1	17.23	1.15	3.874	A	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	5.33	0.36	2.023	A	A
2	EBOFF	1	1	4.93	0.33	6.335	A	A
2	A5N	1	1	0.79	0.05	3.218	A	A
2	A5N	1	2	3.42	0.23	4.966	A	A
2	A5N	2	2	0.00	0.00	0.000	A	A

Lanes: Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.10	0.00	0.00	0.00	0.44
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	0.74	0.00	0.00	2.07	3.33
1	WBOFF	2	2	0.01	0.00	0.00	0.00	0.00
1	A5S	1	1	0.49	0.00	0.00	1.36	2.13
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	0.72	0.00	0.00	1.98	3.39
2	A5114	1	2	1.41	0.00	0.00	4.02	5.88
2	A5114	2	1	0.07	0.00	0.00	0.00	0.00
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.34	0.00	0.00	0.94	1.96
2	EBOFF	1	1	0.28	0.00	0.00	0.70	1.37
2	A5N	1	1	0.06	0.00	0.00	0.00	0.13
2	A5N	1	2	0.24	0.00	0.00	0.58	1.13
2	A5N	2	2	0.00	0.00	0.00	0.00	0.00

Queue Variation results: (16:30-16:45)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.22	0.00	0.00	0.46	1.33
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	1.68	0.00	0.17	5.08	7.00
1	WBOFF	2	2	0.12	0.00	0.00	0.00	0.00
1	A5S	1	1	0.90	0.00	0.00	2.42	3.45
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	1.50	0.00	0.00	3.91	6.10
2	A5114	1	2	2.81	0.00	1.26	9.00	9.00
2	A5114	2	1	0.74	0.00	0.00	-0.04	4.71
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.57	0.00	0.00	1.95	3.00
2	EBOFF	1	1	0.50	0.00	0.00	1.34	2.14
2	A5N	1	1	0.07	0.00	0.00	0.00	0.21
2	A5N	1	2	0.33	0.00	0.00	0.88	1.57
2	A5N	2	2	0.00	0.00	0.00	0.00	0.00

Queue Variation results: (16:45-17:00)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.25	0.00	0.00	0.63	1.47
1	WBOFF	1	1	0.01	0.00	0.00	0.00	0.00
1	WBOFF	1	2	4.15	0.00	4.33	7.00	7.00
1	WBOFF	2	2	2.68	0.00	0.00	8.79	13.33
1	A5S	1	1	3.10	0.00	1.34	7.98	10.75
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	3.29	0.00	1.66	9.00	9.00
2	A5114	1	2	6.85	0.00	9.00	9.00	9.00
2	A5114	2	1	13.69	0.00	7.23	36.30	45.13
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.90	0.00	0.00	3.00	3.00
2	EBOFF	1	1	1.25	0.00	0.00	3.22	4.90
2	A5N	1	1	0.11	0.00	0.00	0.00	0.56
2	A5N	1	2	0.64	0.00	0.00	1.69	2.72
2	A5N	2	2	0.01	0.00	0.00	0.00	0.00

Queue Variation results: (17:00-17:15)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.33	0.00	0.00	0.93	1.83
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	4.35	0.00	4.66	7.00	7.00
1	WBOFF	2	2	3.63	0.00	0.00	12.85	18.33
1	A5S	1	1	3.40	0.00	1.34	9.13	11.33
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	3.70	0.00	2.36	9.00	9.00
2	A5114	1	2	7.07	0.00	9.00	9.00	9.00
2	A5114	2	1	23.14	0.00	16.96	55.75	73.63
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.91	0.00	0.00	3.00	3.00
2	EBOFF	1	1	1.23	0.00	0.00	3.38	4.77
2	A5N	1	1	0.13	0.00	0.00	0.00	0.65
2	A5N	1	2	0.65	0.00	0.00	1.74	2.51
2	A5N	2	2	0.00	0.00	0.00	0.00	0.00

Queue Variation results: (17:15-17:30)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.21	0.00	0.00	0.38	1.32
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	1.64	0.00	0.00	5.23	7.00
1	WBOFF	2	2	0.18	0.00	0.00	0.00	0.22
1	A5S	1	1	1.11	0.00	0.00	2.89	3.93
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	1.83	0.00	0.14	5.25	7.79
2	A5114	1	2	3.92	0.00	2.62	9.00	9.00
2	A5114	2	1	4.94	0.00	0.00	19.10	35.08
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.49	0.00	0.00	1.58	3.00
2	EBOFF	1	1	0.53	0.00	0.00	1.38	2.06
2	A5N	1	1	0.08	0.00	0.00	0.00	0.33
2	A5N	1	2	0.31	0.00	0.00	0.79	1.52
2	A5N	2	2	0.00	0.00	0.00	0.00	0.00

Queue Variation results: (17:30-17:45)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.11	0.00	0.00	0.00	0.54
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	0.78	0.00	0.00	2.29	3.72
1	WBOFF	2	2	0.01	0.00	0.00	0.00	0.00
1	A5S	1	1	0.49	0.00	0.00	1.39	2.46
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	0.79	0.00	0.00	2.19	3.51
2	A5114	1	2	1.45	0.00	0.00	4.13	5.78
2	A5114	2	1	0.08	0.00	0.00	0.00	0.00
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.35	0.00	0.00	0.98	3.00
2	EBOFF	1	1	0.29	0.00	0.00	0.70	1.38
2	A5N	1	1	0.04	0.00	0.00	0.00	0.00
2	A5N	1	2	0.22	0.00	0.00	0.51	0.96
2	A5N	2	2	0.00	0.00	0.00	0.00	0.00

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A55J6_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A55 J6\2018 DF
Report generation date: 14/06/2018 11:16:15

« (Default Analysis Set) - 2023 Base + Dev, AM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Direct/Resultant Flows
» Turning Proportions
» Vehicle Mix
» Results
» Lane Results

Summary of junction performance

There are warnings associated with this model run - see the 'Data Errors and Warnings' tables.

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 [Entry Lane Simulation] - 2023 Base + Dev			
Junction 1 - Arm A5N	0.13	1.39	N/A	A
Junction 1 - Arm WBOFF	101.90	493.29	N/A	F
Junction 1 - Arm A5S	6.32	51.53	N/A	F
Junction 2 - Arm A5114	14.67	56.10	N/A	F
Junction 2 - Arm A5S	1.07	4.06	N/A	A
Junction 2 - Arm EBOFF	4.71	49.14	N/A	E
Junction 2 - Arm A5N	43.09	238.50	N/A	F

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM" model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:15 - 17:45
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM " model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:15 - 17:45
"D7 - 2023 Base + Dev + Seasonality, AM Aug" model duration: 10:45 - 12:15
"D8 - 2023 Base + Dev + Seasonality, PM Aug" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 11:16:12

File summary

Title	(untitled)
Location	
Site Number	
Date	27/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	RogersA2
Description	

Analysis Options

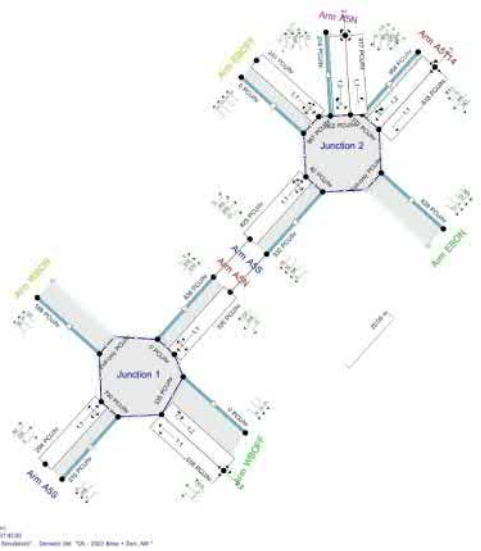
Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Entry Lane Analysis Options

Stop Criteria (%)	Random Seed	Results Refresh Speed (s)	Individual Vehicle Animation Number Of Trials	Time Step Size (s)	Last Run Random Seed	Last Run Number Of Trials
5.00	-1	3	1	10	1514640245	222



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction 1 - Arm A5N	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Last Run	Entry Lane Analysis	Junction 1 - Arm WBOFF - Entry Lane Analysis	Arm WBOFF: Queue at end of modelled period is greater than 10 PCU. Delay for these vehicles has NOT been included in calculations. You may want to increase the modelled period to take account of these vehicles.
Warning	Linked Roundabout	Junction 2 - Arm A5S	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	Entry Lane Simulation		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base + Dev, AM	2023 Base + Dev	AM		Varies by Arm	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	1	A55 J6 WB	Roundabout	A5N,WBOFF,A5S,WBON			258.30	F
2	2	A55 J6 EB	Roundabout	A5114,EBON,A5S,EBOFF,A5N			73.06	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description
1	A5N	A5N	(untitled)	
1	WBOFF	WBOFF	(untitled)	
1	A5S	A5S	(untitled)	
1	WBON	WBON	(untitled)	
2	A5114	A5114	(untitled)	
2	EBON	EBON	(untitled)	
2	A5S	A5S	(untitled)	
2	EBOFF	EBOFF	(untitled)	
2	A5N	A5N	(untitled)	

Capacity Options

Junction	Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	A5N	0.00	99999.00
1	WBOFF	0.00	99999.00
1	A5S	0.00	99999.00
1	WBON	0.00	99999.00
2	A5114	0.00	99999.00
2	EBON	0.00	99999.00
2	A5S	0.00	99999.00
2	EBOFF	0.00	99999.00
2	A5N	0.00	99999.00

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	A5N	3.50	6.40	4.90	19.50	47.00	34.00	
1	WBOFF	5.10	8.10	17.00	27.00	47.00	43.00	
1	A5S	3.00	4.00	6.00	18.00	47.00	27.00	
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	A5114	4.30	8.60	5.00	20.00	48.00	48.00	
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	A5S	3.50	6.40	4.90	18.00	48.00	27.00	
2	EBOFF	3.40	6.50	1.00	30.50	48.00	39.00	
2	A5N	5.00	10.00	0.10	21.00	48.00	37.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	A5N		(calculated)	(calculated)	0.547	1343.496
1	WBOFF		(calculated)	(calculated)	0.680	2057.281
1	A5S		(calculated)	(calculated)	0.509	1112.116
1	WBON		(calculated)	(calculated)	Exit-only	Exit-only
2	A5114		(calculated)	(calculated)	0.569	1547.086
2	EBON		(calculated)	(calculated)	Exit-only	Exit-only
2	A5S		(calculated)	(calculated)	0.555	1370.930
2	EBOFF		(calculated)	(calculated)	0.498	1100.148
2	A5N		(calculated)	(calculated)	0.570	1490.932

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Junction	Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
1	A5N	None			
1	WBOFF	Percentage			92.00
1	A5S	Percentage			80.00
1	WBON	None			
2	A5114	Percentage			92.00
2	EBON	None			
2	A5S	None			
2	EBOFF	Percentage			75.00
2	A5N	Percentage			97.00

Entry Lane Analysis: Arm options

Junction	Arm	Lane Capacity Source	Traffic Considering Secondary Lanes (%)
1	A5N	Evenly split	10.00
1	WBOFF	Evenly split	10.00
1	A5S	Evenly split	10.00
1	WBON	Evenly split	10.00
2	A5114	Evenly split	10.00
2	EBON	Evenly split	10.00
2	A5S	Evenly split	10.00
2	EBOFF	Evenly split	10.00
2	A5N	Evenly split	10.00

Lanes

Junction	Arm	Lane Level	Lane	Has Limited Storage	Storage (PCU)	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	A5N	1	1		Infinity	0.00	99999.00
1	WBOFF	1	1	✓	7.00	0.00	99999.00
1	WBOFF	1	2	✓	7.00	0.00	99999.00
1	WBOFF	2	2		Infinity		
1	A5S	1	1		Infinity	0.00	99999.00
1	WBON	1	1		Infinity	0.00	99999.00
2	A5114	1	1	✓	9.00	0.00	99999.00
2	A5114	1	2	✓	9.00	0.00	99999.00
2	A5114	2	1		Infinity		
2	EBON	1	1		Infinity	0.00	99999.00
2	A5S	1	1		Infinity	0.00	99999.00
2	EBOFF	1	1		Infinity	0.00	99999.00
2	A5N	1	1	✓	8.00	0.00	99999.00
2	A5N	1	2	✓	8.00	0.00	99999.00
2	A5N	2	2		Infinity		

Entry Lane slope and intercept

Junction	Arm	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	A5N	(calculated)	(calculated)	0.547	1343.496
1	WBOFF	(calculated)	(calculated)	0.340	1028.641
1	WBOFF	(calculated)	(calculated)	0.340	1028.641
1	A5S	(calculated)	(calculated)	0.509	1112.116
1	WBON	(calculated)	(calculated)	Exit-only	Exit-only
2	A5114	(calculated)	(calculated)	0.285	773.543
2	A5114	(calculated)	(calculated)	0.285	773.543
2	EBON	(calculated)	(calculated)	Exit-only	Exit-only
2	A5S	(calculated)	(calculated)	0.555	1370.930
2	EBOFF	(calculated)	(calculated)	0.498	1100.148
2	A5N	(calculated)	(calculated)	0.285	745.466
2	A5N	(calculated)	(calculated)	0.285	745.466

Lane Movements

Junction	Arm	Lane Level	Lane	Arm			
				A5N	WBOFF	A5S	WBON
1	A5N	1	1	✓	✓	✓	✓
1	WBOFF	1	1			✓	✓
1	WBOFF	1	2	✓	✓		
1	WBOFF	2	2	✓	✓	✓	✓
1	A5S	1	1	✓	✓	✓	✓
1	WBON	1	1	✓	✓	✓	✓

Lane Movements

Junction	Arm	Lane Level	Lane	Arm				
				A5114	EBON	A5S	EBOFF	A5N
2	A5114	1	1		✓			
2	A5114	1	2	✓		✓	✓	✓
2	A5114	2	1	✓	✓	✓	✓	✓
2	EBON	1	1	✓	✓	✓	✓	✓
2	A5S	1	1	✓	✓	✓	✓	✓
2	EBOFF	1	1	✓	✓	✓	✓	✓
2	A5N	1	1	✓				
2	A5N	1	2		✓	✓	✓	✓
2	A5N	2	2	✓	✓	✓	✓	✓

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	A5N	Linked Arm		N/A	
1	WBOFF	ONE HOUR	✓	816.00	100.000
1	A5S	ONE HOUR	✓	373.00	100.000
1	WBON	Exit-only	✓	Exit-only	Exit-only
2	A5114	ONE HOUR	✓	834.00	100.000
2	EBON	Exit-only	✓	Exit-only	Exit-only
2	A5S	Linked Arm		N/A	
2	EBOFF	ONE HOUR	✓	316.00	100.000
2	A5N	ONE HOUR	✓	561.00	100.000

Linked Arm Data

Junction	Arm	From Junction ID	From Arm ID	Link Type	Flow Source	Uniform Flow (PCU/hr)	Flow Multiplier (%)	Internal Storage Space (PCU)
1	A5N	2	A5S	Simple (vertical queueing)	Normal	0.00	100.00	
2	A5S	1	A5N	Simple (vertical queueing)	Normal	0.00	100.00	

Direct/Resultant Flows

Direct Flows Data

Time Segment	Junction	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	1	A5N	0.00	0.00		
07:45-08:00	1	WBOFF	614.33	614.33		
07:45-08:00	1	A5S	280.81	280.81		
07:45-08:00	1	WBON	Exit-only	0.00		
08:00-08:15	1	A5N	0.00	0.00		
08:00-08:15	1	WBOFF	733.57	733.57		
08:00-08:15	1	A5S	335.32	335.32		
08:00-08:15	1	WBON	Exit-only	0.00		
08:15-08:30	1	A5N	0.00	0.00		
08:15-08:30	1	WBOFF	898.43	898.43		
08:15-08:30	1	A5S	410.68	410.68		
08:15-08:30	1	WBON	Exit-only	0.00		
08:30-08:45	1	A5N	0.00	0.00		
08:30-08:45	1	WBOFF	898.43	898.43		
08:30-08:45	1	A5S	410.68	410.68		
08:30-08:45	1	WBON	Exit-only	0.00		
08:45-09:00	1	A5N	0.00	0.00		
08:45-09:00	1	WBOFF	733.57	733.57		
08:45-09:00	1	A5S	335.32	335.32		
08:45-09:00	1	WBON	Exit-only	0.00		
09:00-09:15	1	A5N	0.00	0.00		
09:00-09:15	1	WBOFF	614.33	614.33		
09:00-09:15	1	A5S	280.81	280.81		
09:00-09:15	1	WBON	Exit-only	0.00		
07:45-08:00	2	A5114	627.88	627.88		
07:45-08:00	2	EBON	Exit-only	0.00		
07:45-08:00	2	A5S	0.00	0.00		
07:45-08:00	2	EBOFF	237.90	237.90		
07:45-08:00	2	A5N	422.35	422.35		

08:00-08:15	2	A5114	749.75	749.75		
08:00-08:15	2	EBON	Exit-only	0.00		
08:00-08:15	2	A5S	0.00	0.00		
08:00-08:15	2	EBOFF	284.08	284.08		
08:00-08:15	2	A5N	504.33	504.33		
08:15-08:30	2	A5114	918.25	918.25		
08:15-08:30	2	EBON	Exit-only	0.00		
08:15-08:30	2	A5S	0.00	0.00		
08:15-08:30	2	EBOFF	347.92	347.92		
08:15-08:30	2	A5N	617.67	617.67		
08:30-08:45	2	A5114	918.25	918.25		
08:30-08:45	2	EBON	Exit-only	0.00		
08:30-08:45	2	A5S	0.00	0.00		
08:30-08:45	2	EBOFF	347.92	347.92		
08:30-08:45	2	A5N	617.67	617.67		
08:45-09:00	2	A5114	749.75	749.75		
08:45-09:00	2	EBON	Exit-only	0.00		
08:45-09:00	2	A5S	0.00	0.00		
08:45-09:00	2	EBOFF	284.08	284.08		
08:45-09:00	2	A5N	504.33	504.33		
09:00-09:15	2	A5114	627.88	627.88		
09:00-09:15	2	EBON	Exit-only	0.00		
09:00-09:15	2	A5S	0.00	0.00		
09:00-09:15	2	EBOFF	237.90	237.90		
09:00-09:15	2	A5N	422.35	422.35		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.000	0.000	276.000	176.000
	WBOFF	810.000	0.000	6.000	0.000
	A5S	282.000	0.000	0.000	91.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.00	0.00	0.61	0.39
	WBOFF	0.99	0.00	0.01	0.00
	A5S	0.76	0.00	0.00	0.24
	WBON	0.25	0.25	0.25	0.25

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Counts / Proportions (PCU/hr) - Junction 2 (for whole period)

		To				
		A5114	EBON	A5S	EBOFF	A5N
From	A5114	0.000	497.000	275.000	0.000	62.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	848.000	24.000	0.000	0.000	220.000
	EBOFF	269.000	0.000	41.000	0.000	6.000
	A5N	149.000	283.000	129.000	0.000	0.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 2 (for whole period)

		To				
		A5114	EBON	A5S	EBOFF	A5N
From	A5114	0.00	0.60	0.33	0.00	0.07
	EBON	0.20	0.20	0.20	0.20	0.20
	A5S	0.78	0.02	0.00	0.00	0.20
	EBOFF	0.85	0.00	0.13	0.00	0.02
	A5N	0.27	0.50	0.23	0.00	0.00

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	1.000	1.000	1.000	1.000
	WBOFF	1.000	1.000	1.000	1.000
	A5S	1.000	1.000	1.000	1.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.0	0.0	0.0	0.0
	WBOFF	0.0	0.0	0.0	0.0
	A5S	0.0	0.0	0.0	0.0
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Average PCU Per Vehicle - Junction 2 (for whole period)

		To				
		A5114	EBON	A5S	EBOFF	A5N
From	A5114	1.000	1.000	1.000	1.000	1.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	1.000	1.000	1.000	1.000	1.000
	EBOFF	1.000	1.000	1.000	1.000	1.000
	A5N	1.000	1.000	1.000	1.000	1.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 2 (for whole period)

		To				
		A5114	EBON	A5S	EBOFF	A5N
From	A5114	0.0	0.0	0.0	0.0	0.0
	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	0.0	0.0	0.0	0.0	0.0
	EBOFF	0.0	0.0	0.0	0.0	0.0
	A5N	0.0	0.0	0.0	0.0	0.0

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Junction	Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)
1	A5N	1.39	0.13	0.71	A	407.57	611.35	11.82	1.16	0.13
1	WBOFF	493.29	101.90	159.70	F	746.62	1119.93	4661.37	249.73	51.79
1	A5S	51.53	6.32	22.98	F	342.12	513.18	256.12	29.94	2.85
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	56.10	14.67	42.80	F	758.78	1138.18	564.84	29.78	6.28
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	4.06	1.07	3.00	A	960.77	1441.15	87.37	3.64	0.97
2	EBOFF	49.14	4.71	15.97	E	294.50	441.76	208.03	28.26	2.31
2	A5N	238.50	43.09	86.25	F	521.04	781.55	1665.82	127.89	18.51

Main Results for each time segment

Main results: (07:45-08:00)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	331.89	82.97	334.86	835.68	0.00	0.00	0.07	0.837	A
1	WBOFF	623.24	155.81	617.57	0.00	334.86	0.00	2.75	14.168	B
1	A5S	292.70	73.18	294.32	215.41	729.73	0.00	0.95	8.905	A
1	WBON	Exit-only	Exit-only	Exit-only	188.38	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	617.84	154.46	617.84	953.51	371.89	0.00	1.39	9.016	A
2	EBON	Exit-only	Exit-only	Exit-only	629.19	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	835.68	208.92	824.86	331.89	42.16	0.00	0.77	2.652	A
2	EBOFF	245.41	61.35	249.46	0.00	867.03	0.00	0.68	9.583	A
2	A5N	418.92	104.73	417.03	214.32	902.16	0.00	1.76	13.554	B

Main results: (08:00-08:15)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	397.57	99.39	395.68	955.68	0.00	0.00	0.13	1.083	A
1	WBOFF	712.97	178.24	700.00	0.00	395.68	0.00	12.30	46.560	E
1	A5S	329.73	82.43	328.11	250.00	852.70	0.00	1.83	18.206	C
1	WBON	Exit-only	Exit-only	Exit-only	225.14	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	750.00	187.50	742.97	1118.92	434.59	0.00	2.95	14.170	B
2	EBON	Exit-only	Exit-only	Exit-only	728.92	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	955.68	238.92	957.03	397.57	54.32	0.00	0.94	3.459	A
2	EBOFF	296.22	74.05	287.03	0.00	1011.35	0.00	1.88	18.953	C
2	A5N	512.70	128.18	505.14	250.27	1048.11	0.00	5.28	33.444	D

Main results: (08:15-08:30)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	464.32	116.08	471.62	1009.19	0.00	0.13	0.13	1.321	A
1	WBOFF	905.68	226.42	718.11	0.00	471.62	12.30	58.01	179.345	F
1	A5S	395.14	98.78	397.03	293.78	896.22	1.83	5.16	39.436	E
1	WBON	Exit-only	Exit-only	Exit-only	284.05	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	887.57	221.89	867.03	1228.38	465.14	2.95	11.97	37.487	E
2	EBON	Exit-only	Exit-only	Exit-only	817.84	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1009.19	252.30	1020.27	464.32	62.16	0.94	0.98	3.957	A
2	EBOFF	351.08	87.77	347.57	0.00	1082.43	1.88	4.37	37.456	E
2	A5N	620.27	155.07	543.78	277.84	1152.16	5.28	25.63	109.221	F

Main results: (08:30-08:45)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	470.27	117.57	478.92	1030.54	0.00	0.13	0.13	1.394	A
1	WBOFF	910.27	227.57	718.38	0.00	478.92	58.01	101.90	403.808	F
1	A5S	411.89	102.97	427.03	295.68	901.62	5.16	6.32	51.527	F
1	WBON	Exit-only	Exit-only	Exit-only	298.11	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	894.86	223.72	904.86	1243.78	468.92	11.97	14.67	56.104	F
2	EBON	Exit-only	Exit-only	Exit-only	856.49	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1030.54	257.64	1034.32	470.27	67.57	0.98	1.07	4.061	A
2	EBOFF	345.41	86.35	345.95	0.00	1101.89	4.37	4.71	49.137	E
2	A5N	632.43	158.11	547.84	282.16	1165.68	25.63	43.09	231.850	F

Main results: (08:45-09:00)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	418.65	104.66	419.73	978.65	0.00	0.13	0.09	1.226	A
1	WBOFF	720.00	180.00	741.08	0.00	419.73	101.90	100.19	493.292	F
1	A5S	326.22	81.55	326.49	266.49	894.32	6.32	2.31	32.148	D
1	WBON	Exit-only	Exit-only	Exit-only	242.16	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	775.41	193.85	776.76	1156.76	465.68	14.67	5.38	33.971	D
2	EBON	Exit-only	Exit-only	Exit-only	754.86	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	978.65	244.66	979.19	418.65	50.81	1.07	0.99	3.832	A
2	EBOFF	299.46	74.86	297.30	0.00	1030.00	4.71	2.02	29.069	D
2	A5N	528.38	132.09	551.35	254.32	1072.97	43.09	31.76	238.505	F

Main results: (09:00-09:15)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	362.70	90.68	360.27	954.86	0.00	0.09	0.11	0.935	A
1	WBOFF	607.57	151.89	741.35	0.00	360.27	100.19	65.28	350.505	F
1	A5S	297.03	74.26	276.49	225.68	880.27	2.31	1.49	16.294	C
1	WBON	Exit-only	Exit-only	Exit-only	201.89	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	627.03	156.76	627.30	1082.43	414.59	5.38	1.89	12.254	B
2	EBON	Exit-only	Exit-only	Exit-only	642.70	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	954.86	238.72	961.08	362.70	43.51	0.99	0.98	3.682	A
2	EBOFF	229.46	57.36	233.51	0.00	1004.59	2.02	1.00	14.917	B
2	A5N	413.51	103.38	469.46	235.68	1002.43	31.76	8.05	104.931	F

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1.15	0.08	0.837	A	A
1	WBOFF	35.45	2.36	14.168	B	B
1	A5S	10.29	0.69	8.905	A	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	23.52	1.57	9.016	A	A
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	8.90	0.59	2.652	A	A
2	EBOFF	9.30	0.62	9.583	A	A
2	A5N	23.13	1.54	13.554	B	B

Queueing Delay results: (08:00-08:15)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1.79	0.12	1.083	A	A
1	WBOFF	132.15	8.81	46.560	E	D
1	A5S	24.84	1.66	18.206	C	B
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	43.30	2.89	14.170	B	B
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	13.55	0.90	3.459	A	A
2	EBOFF	21.96	1.46	18.953	C	B
2	A5N	67.69	4.51	33.444	D	C

Queueing Delay results: (08:15-08:30)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	2.55	0.17	1.321	A	A
1	WBOFF	525.36	35.02	179.345	F	F
1	A5S	64.44	4.30	39.436	E	D
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	132.74	8.85	37.487	E	D
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	16.67	1.11	3.957	A	A
2	EBOFF	52.71	3.51	37.456	E	D
2	A5N	233.51	15.57	109.221	F	F

Queueing Delay results: (08:30-08:45)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	2.74	0.18	1.394	A	A
1	WBOFF	1205.97	80.40	403.808	F	F
1	A5S	86.21	5.75	51.527	F	D
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	209.64	13.98	56.104	F	E
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	17.30	1.15	4.061	A	A
2	EBOFF	70.45	4.70	49.137	E	D
2	A5N	513.70	34.25	231.850	F	F

Queueing Delay results: (08:45-09:00)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	2.17	0.14	1.226	A	A
1	WBOFF	1524.43	101.63	493.292	F	F
1	A5S	50.02	3.33	32.148	D	C
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	120.33	8.02	33.971	D	C
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	15.93	1.06	3.832	A	A
2	EBOFF	37.88	2.53	29.069	D	C
2	A5N	557.61	37.17	238.505	F	F

Queueing Delay results: (09:00-09:15)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1.43	0.10	0.935	A	A
1	WBOFF	1238.01	82.53	350.505	F	F
1	A5S	20.32	1.35	16.294	C	B
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	35.30	2.35	12.254	B	B
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	15.03	1.00	3.682	A	A
2	EBOFF	15.74	1.05	14.917	B	B
2	A5N	270.19	18.01	104.931	F	F

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.07	0.00	0.00	0.00	0.00
1	WBOFF	2.75	0.00	0.72	7.54	11.18
1	A5S	0.95	0.00	0.00	2.44	3.61
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1.39	0.00	0.30	3.43	4.48
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.77	0.00	0.00	3.00	3.00
2	EBOFF	0.68	0.00	0.00	1.77	2.77
2	A5N	1.76	0.00	0.45	3.98	4.95

Queue Variation results: (08:00-08:15)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.13	0.00	0.00	0.00	0.71
1	WBOFF	12.30	0.00	9.29	28.27	34.45
1	A5S	1.83	0.00	0.11	5.13	7.73
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	2.95	0.00	1.32	6.53	8.90
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.94	0.00	0.00	3.00	3.00
2	EBOFF	1.88	0.00	0.28	4.36	7.30
2	A5N	5.28	0.00	2.74	13.45	17.63

Queue Variation results: (08:15-08:30)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.13	0.00	0.00	0.00	0.69
1	WBOFF	58.01	23.53	56.75	86.93	97.90
1	A5S	5.16	0.00	3.12	12.54	15.95
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	11.97	0.00	7.00	27.45	40.90
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.98	0.00	0.00	3.00	3.00
2	EBOFF	4.37	0.00	2.23	10.36	13.90
2	A5N	25.63	3.28	23.57	45.80	51.90

Queue Variation results: (08:30-08:45)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.13	0.00	0.00	-0.01	0.64
1	WBOFF	101.90	48.50	101.00	141.40	150.90
1	A5S	6.32	0.00	3.15	15.90	22.98
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	14.67	0.00	8.63	34.93	42.80
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1.07	0.00	0.00	3.00	3.00
2	EBOFF	4.71	0.00	2.15	13.60	15.97
2	A5N	43.09	6.05	41.50	74.20	86.25

Queue Variation results: (08:45-09:00)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.09	0.00	0.00	0.00	0.27
1	WBOFF	100.19	39.10	98.20	147.80	159.70
1	A5S	2.31	0.00	0.72	5.83	8.58
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	5.38	0.00	2.71	12.83	17.85
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.99	0.00	0.00	3.00	3.00
2	EBOFF	2.02	0.00	0.65	4.69	7.97
2	A5N	31.76	0.28	30.50	69.20	77.07

Queue Variation results: (09:00-09:15)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.11	0.00	0.00	0.00	0.43
1	WBOFF	65.28	3.10	60.00	110.80	130.85
1	A5S	1.49	0.00	0.13	3.62	4.95
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1.89	0.00	0.54	4.85	7.32
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.98	0.00	0.00	3.00	3.00
2	EBOFF	1.00	0.00	0.00	2.32	3.58
2	A5N	8.05	0.00	2.07	27.80	36.90

Generated on 14/06/2018 11:16:27 using Junctions 8 (8.0.6.541)

Lane Results

Lanes: Main Results for each time segment

Main results: (07:45-08:00)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	331.89	82.97	334.86	1343.50	0.247	0.00	0.07	0.837	A
1	WBOFF	1	1	7.30	1.82	7.30	841.57	0.009	0.00	0.00	0.892	A
1	WBOFF	1	2	610.27	152.57	602.97	841.57	0.725	0.00	2.27	12.130	B
1	WBOFF	2	2	623.24	155.81	617.57			0.00	0.48	2.069	A
1	A5S	1	1	292.70	73.18	294.32	592.73	0.494	0.00	0.95	8.905	A
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	382.97	95.74	390.54	614.25	0.623	0.00	1.06	10.801	B
2	A5114	1	2	234.86	58.72	240.81	614.25	0.382	0.00	0.33	6.140	A
2	A5114	2	1	617.84	154.46	617.84			0.00	0.00	0.085	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	835.68	208.92	824.86	1347.52	0.620	0.00	0.77	2.652	A
2	EBOFF	1	1	245.41	61.35	249.46	501.54	0.489	0.00	0.68	9.583	A
2	A5N	1	1	108.38	27.09	107.30	473.53	0.229	0.00	0.19	5.925	A
2	A5N	1	2	308.65	77.16	315.95	473.53	0.652	0.00	1.50	15.866	C
2	A5N	2	2	418.92	104.73	417.03			0.00	0.08	0.324	A

Main results: (08:00-08:15)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	397.57	99.39	395.68	1343.50	0.296	0.07	0.13	1.083	A
1	WBOFF	1	1	5.95	1.49	5.95	822.54	0.007	0.00	0.00	0.943	A
1	WBOFF	1	2	694.05	173.51	701.08	822.54	0.844	2.27	5.18	23.856	C
1	WBOFF	2	2	712.97	178.24	700.00			0.48	7.13	22.515	C
1	A5S	1	1	329.73	82.43	328.11	542.68	0.608	0.95	1.83	18.206	C
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	447.57	111.89	450.81	597.83	0.749	1.06	2.05	16.600	C
2	A5114	1	2	295.41	73.85	295.41	597.83	0.494	0.33	0.60	8.542	A
2	A5114	2	1	750.00	187.50	742.97			0.00	0.30	0.857	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	955.68	238.92	957.03	1340.77	0.713	0.77	0.94	3.459	A
2	EBOFF	1	1	296.22	74.05	287.03	447.67	0.662	0.68	1.88	18.953	C
2	A5N	1	1	127.30	31.82	126.49	433.16	0.294	0.19	0.28	7.770	A
2	A5N	1	2	377.84	94.46	378.92	433.16	0.872	1.50	3.59	34.062	D
2	A5N	2	2	512.70	128.18	505.14			0.08	1.41	6.115	A

Generated on 14/06/2018 11:16:27 using Junctions 8 (8.0.6.541)

Main results: (08:15-08:30)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	464.32	116.08	471.62	1343.50	0.346	0.13	0.13	1.321	A
1	WBOFF	1	1	6.76	1.69	7.03	798.77	0.008	0.00	0.00	0.825	A
1	WBOFF	1	2	711.35	177.84	711.35	798.77	0.891	5.18	7.00	33.975	D
1	WBOFF	2	2	905.68	226.42	718.11			7.13	51.01	145.265	F
1	A5S	1	1	395.14	98.78	397.03	524.98	0.753	1.83	5.16	39.436	E
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	518.11	129.53	527.84	589.83	0.878	2.05	5.13	31.805	D
2	A5114	1	2	348.92	87.23	351.35	589.83	0.592	0.60	1.47	13.232	B
2	A5114	2	1	887.57	221.89	867.03			0.30	5.37	12.816	B
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	1009.19	252.30	1020.27	1336.42	0.755	0.94	0.98	3.957	A
2	EBOFF	1	1	351.08	87.77	347.57	421.15	0.834	1.88	4.37	37.456	E
2	A5N	1	1	138.65	34.66	139.73	404.37	0.343	0.28	0.52	12.201	B
2	A5N	1	2	405.14	101.28	401.62	404.37	1.002	3.59	7.45	58.102	F
2	A5N	2	2	620.27	155.07	543.78			1.41	17.66	62.154	F

Main results: (08:30-08:45)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	470.27	117.57	478.92	1343.50	0.350	0.13	0.13	1.394	A
1	WBOFF	1	1	4.32	1.08	4.32	796.49	0.005	0.00	0.00	1.440	A
1	WBOFF	1	2	714.05	178.51	714.05	796.49	0.897	7.00	7.00	35.320	E
1	WBOFF	2	2	910.27	227.57	718.38			51.01	94.90	369.043	F
1	A5S	1	1	411.89	102.97	427.03	522.78	0.788	5.16	6.32	51.527	F
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	544.86	136.22	557.03	588.84	0.925	5.13	5.59	37.551	E
2	A5114	1	2	360.00	90.00	368.38	588.84	0.611	1.47	1.58	15.086	C
2	A5114	2	1	894.86	223.72	904.86			5.37	7.50	27.445	D
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	1030.54	257.64	1034.32	1333.42	0.773	0.98	1.07	4.061	A
2	EBOFF	1	1	345.41	86.35	345.95	413.88	0.835	4.37	4.71	49.137	E
2	A5N	1	1	143.24	35.81	145.14	400.64	0.358	0.52	0.53	13.657	B
2	A5N	1	2	404.59	101.15	401.89	400.64	1.010	7.45	7.69	67.792	F
2	A5N	2	2	632.43	158.11	547.84			17.66	34.87	178.553	F

Generated on 14/06/2018 11:16:27 using Junctions 8 (8.0.6.541)

Main results: (08:45-09:00)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	418.65	104.66	419.73	1343.50	0.312	0.13	0.09	1.226	A
1	WBOFF	1	1	6.22	1.55	6.22	815.01	0.008	0.00	0.00	0.819	A
1	WBOFF	1	2	734.86	183.72	734.86	815.01	0.902	7.00	7.00	34.305	D
1	WBOFF	2	2	720.00	180.00	741.08			94.90	93.19	460.152	F
1	A5S	1	1	326.22	81.55	326.49	525.75	0.620	6.32	2.31	32.148	D
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	476.22	119.05	461.89	589.69	0.808	5.59	3.28	27.876	D
2	A5114	1	2	300.54	75.14	296.76	589.69	0.510	1.58	0.92	11.874	B
2	A5114	2	1	775.41	193.85	776.76			7.50	1.17	13.180	B
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	978.65	244.66	979.19	1342.72	0.729	1.07	0.99	3.832	A
2	EBOFF	1	1	299.46	74.86	297.30	440.71	0.679	4.71	2.02	29.069	D
2	A5N	1	1	139.19	34.80	140.00	426.28	0.327	0.53	0.35	12.239	B
2	A5N	1	2	412.16	103.04	409.46	426.28	0.967	7.69	6.73	62.740	F
2	A5N	2	2	528.38	132.09	551.35			34.87	24.68	190.281	F

Main results: (09:00-09:15)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	362.70	90.68	360.27	1343.50	0.270	0.09	0.11	0.935	A
1	WBOFF	1	1	5.68	1.42	5.41	833.62	0.007	0.00	0.01	1.341	A
1	WBOFF	1	2	735.68	183.92	740.27	833.62	0.883	7.00	6.66	32.666	D
1	WBOFF	2	2	607.57	151.89	741.35			93.19	58.61	320.907	F
1	A5S	1	1	297.03	74.26	276.49	531.46	0.559	2.31	1.49	16.294	C
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	367.03	91.76	380.54	603.07	0.609	3.28	1.23	14.143	B
2	A5114	1	2	260.27	65.07	253.78	603.07	0.432	0.92	0.63	7.182	A
2	A5114	2	1	627.03	156.76	627.30			1.17	0.03	1.135	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	954.86	238.72	961.08	1346.77	0.709	0.99	0.98	3.682	A
2	EBOFF	1	1	229.46	57.36	233.51	450.20	0.510	2.02	1.00	14.917	B
2	A5N	1	1	132.43	33.11	129.19	445.79	0.297	0.35	0.36	9.993	A
2	A5N	1	2	337.03	84.26	365.41	445.79	0.756	6.73	3.31	47.901	E
2	A5N	2	2	413.51	103.38	469.46			24.68	4.38	71.110	F

Lanes: Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	1.15	0.08	0.837	A	A
1	WBOFF	1	1	0.02	0.00	0.892	A	A
1	WBOFF	1	2	30.25	2.02	12.130	B	B
1	WBOFF	2	2	5.18	0.35	2.069	A	A
1	A5S	1	1	10.29	0.69	8.905	A	A
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	16.84	1.12	10.801	B	B
2	A5114	1	2	6.45	0.43	6.140	A	A
2	A5114	2	1	0.22	0.01	0.085	A	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	8.90	0.59	2.652	A	A
2	EBOFF	1	1	9.30	0.62	9.583	A	A
2	A5N	1	1	2.74	0.18	5.925	A	A
2	A5N	1	2	19.84	1.32	15.866	C	B
2	A5N	2	2	0.55	0.04	0.324	A	A

Queueing Delay results: (08:00-08:15)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	1.79	0.12	1.083	A	A
1	WBOFF	1	1	0.02	0.00	0.943	A	A
1	WBOFF	1	2	68.91	4.59	23.856	C	C
1	WBOFF	2	2	63.21	4.21	22.515	C	C
1	A5S	1	1	24.84	1.66	18.206	C	B
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	29.87	1.99	16.600	C	B
2	A5114	1	2	10.88	0.73	8.542	A	A
2	A5114	2	1	2.55	0.17	0.857	A	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	13.55	0.90	3.459	A	A
2	EBOFF	1	1	21.96	1.46	18.953	C	B
2	A5N	1	1	4.34	0.29	7.770	A	A
2	A5N	1	2	51.09	3.41	34.062	D	C
2	A5N	2	2	12.26	0.82	6.115	A	A

Queueing Delay results: (08:15-08:30)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	2.55	0.17	1.321	A	A
1	WBOFF	1	1	0.02	0.00	0.825	A	A
1	WBOFF	1	2	101.21	6.75	33.975	D	C
1	WBOFF	2	2	424.13	28.28	145.265	F	F
1	A5S	1	1	64.44	4.30	39.436	E	D
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	69.41	4.63	31.805	D	C
2	A5114	1	2	19.58	1.31	13.232	B	B
2	A5114	2	1	43.76	2.92	12.816	B	B
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	16.67	1.11	3.957	A	A
2	EBOFF	1	1	52.71	3.51	37.456	E	D
2	A5N	1	1	7.34	0.49	12.201	B	B
2	A5N	1	2	95.52	6.37	58.102	F	E
2	A5N	2	2	130.64	8.71	62.154	F	E

Queueing Delay results: (08:30-08:45)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	2.74	0.18	1.394	A	A
1	WBOFF	1	1	0.03	0.00	1.440	A	A
1	WBOFF	1	2	105.00	7.00	35.320	E	D
1	WBOFF	2	2	1100.95	73.40	369.043	F	F
1	A5S	1	1	86.21	5.75	51.527	F	D
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	84.71	5.65	37.551	E	D
2	A5114	1	2	23.02	1.53	15.086	C	B
2	A5114	2	1	101.91	6.79	27.445	D	C
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	17.30	1.15	4.061	A	A
2	EBOFF	1	1	70.45	4.70	49.137	E	D
2	A5N	1	1	8.39	0.56	13.657	B	B
2	A5N	1	2	113.19	7.55	67.792	F	E
2	A5N	2	2	392.11	26.14	178.553	F	F

Queueing Delay results: (08:45-09:00)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	2.17	0.14	1.226	A	A
1	WBOFF	1	1	0.02	0.00	0.819	A	A
1	WBOFF	1	2	105.00	7.00	34.305	D	C
1	WBOFF	2	2	1419.41	94.63	460.152	F	F
1	A5S	1	1	50.02	3.33	32.148	D	C
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	55.41	3.69	27.876	D	C
2	A5114	1	2	15.71	1.05	11.874	B	B
2	A5114	2	1	49.21	3.28	13.180	B	B
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	15.93	1.06	3.832	A	A
2	EBOFF	1	1	37.88	2.53	29.069	D	C
2	A5N	1	1	7.39	0.49	12.239	B	B
2	A5N	1	2	107.55	7.17	62.740	F	E
2	A5N	2	2	442.67	29.51	190.281	F	F

Queueing Delay results: (09:00-09:15)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	1.43	0.10	0.935	A	A
1	WBOFF	1	1	0.03	0.00	1.341	A	A
1	WBOFF	1	2	103.08	6.87	32.666	D	C
1	WBOFF	2	2	1134.89	75.66	320.907	F	F
1	A5S	1	1	20.32	1.35	16.294	C	B
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	23.77	1.58	14.143	B	B
2	A5114	1	2	7.97	0.53	7.182	A	A
2	A5114	2	1	3.55	0.24	1.135	A	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	15.03	1.00	3.682	A	A
2	EBOFF	1	1	15.74	1.05	14.917	B	B
2	A5N	1	1	5.63	0.38	9.993	A	A
2	A5N	1	2	76.59	5.11	47.901	E	D
2	A5N	2	2	187.97	12.53	71.110	F	E

Lanes: Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.07	0.00	0.00	0.00	0.00
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	2.27	0.00	0.72	7.00	7.00
1	WBOFF	2	2	0.48	0.00	0.00	0.54	4.18
1	A5S	1	1	0.95	0.00	0.00	2.44	3.61
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	1.06	0.00	0.00	2.93	3.90
2	A5114	1	2	0.33	0.00	0.00	0.78	1.43
2	A5114	2	1	0.00	0.00	0.00	0.00	0.00
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.77	0.00	0.00	3.00	3.00
2	EBOFF	1	1	0.68	0.00	0.00	1.77	2.77
2	A5N	1	1	0.19	0.00	0.00	0.42	0.84
2	A5N	1	2	1.50	0.00	0.09	3.79	4.97
2	A5N	2	2	0.08	0.00	0.00	0.00	0.00

Queue Variation results: (08:00-08:15)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.13	0.00	0.00	0.00	0.71
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	5.18	0.00	7.00	7.00	7.00
1	WBOFF	2	2	7.13	0.00	2.29	21.27	27.45
1	A5S	1	1	1.83	0.00	0.11	5.13	7.73
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	2.05	0.00	0.72	5.35	7.45
2	A5114	1	2	0.60	0.00	0.00	1.63	2.99
2	A5114	2	1	0.30	0.00	0.00	0.00	0.00
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.94	0.00	0.00	3.00	3.00
2	EBOFF	1	1	1.88	0.00	0.28	4.36	7.30
2	A5N	1	1	0.28	0.00	0.00	0.67	1.24
2	A5N	1	2	3.59	0.00	2.41	8.00	8.00
2	A5N	2	2	1.41	0.00	0.00	5.27	9.45

Queue Variation results: (08:15-08:30)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.13	0.00	0.00	0.00	0.69
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	7.00	7.00	7.00	7.00	7.00
1	WBOFF	2	2	51.01	16.53	49.75	79.93	90.90
1	A5S	1	1	5.16	0.00	3.12	12.54	15.95
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	5.13	0.00	4.88	9.00	9.00
2	A5114	1	2	1.47	0.00	0.06	4.20	6.58
2	A5114	2	1	5.37	0.00	0.00	16.80	31.95
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.98	0.00	0.00	3.00	3.00
2	EBOFF	1	1	4.37	0.00	2.23	10.36	13.90
2	A5N	1	1	0.52	0.00	0.00	1.54	2.10
2	A5N	1	2	7.45	3.02	8.00	8.00	8.00
2	A5N	2	2	17.66	0.00	15.11	37.53	43.90

Queue Variation results: (08:30-08:45)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.13	0.00	0.00	-0.01	0.64
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	7.00	7.00	7.00	7.00	7.00
1	WBOFF	2	2	94.90	41.50	94.00	134.40	143.90
1	A5S	1	1	6.32	0.00	3.15	15.90	22.98
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	5.59	0.00	6.22	9.00	9.00
2	A5114	1	2	1.58	0.00	0.09	3.86	5.95
2	A5114	2	1	7.50	0.00	0.00	24.90	32.63
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	1.07	0.00	0.00	3.00	3.00
2	EBOFF	1	1	4.71	0.00	2.15	13.60	15.97
2	A5N	1	1	0.53	0.00	0.00	1.23	2.32
2	A5N	1	2	7.69	5.10	8.00	8.00	8.00
2	A5N	2	2	34.87	0.00	33.33	65.90	77.70

Queue Variation results: (08:45-09:00)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.09	0.00	0.00	0.00	0.27
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	7.00	7.00	7.00	7.00	7.00
1	WBOFF	2	2	93.19	32.10	91.20	140.80	152.70
1	A5S	1	1	2.31	0.00	0.72	5.83	8.58
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	3.28	0.00	1.83	9.00	9.00
2	A5114	1	2	0.92	0.00	0.00	2.52	3.97
2	A5114	2	1	1.17	0.00	0.00	2.70	7.80
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.99	0.00	0.00	3.00	3.00
2	EBOFF	1	1	2.02	0.00	0.65	4.69	7.97
2	A5N	1	1	0.35	0.00	0.00	0.86	1.58
2	A5N	1	2	6.73	0.00	8.00	8.00	8.00
2	A5N	2	2	24.68	0.00	21.75	60.80	69.07

Queue Variation results: (09:00-09:15)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.11	0.00	0.00	0.00	0.43
1	WBOFF	1	1	0.01	0.00	0.00	0.00	0.00
1	WBOFF	1	2	6.66	3.10	7.00	7.00	7.00
1	WBOFF	2	2	58.61	0.00	53.00	103.80	123.85
1	A5S	1	1	1.49	0.00	0.13	3.62	4.95
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	1.23	0.00	0.00	3.44	4.98
2	A5114	1	2	0.63	0.00	0.00	1.74	2.66
2	A5114	2	1	0.03	0.00	0.00	0.00	0.00
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.98	0.00	0.00	3.00	3.00
2	EBOFF	1	1	1.00	0.00	0.00	2.32	3.58
2	A5N	1	1	0.36	0.00	0.00	0.93	2.29
2	A5N	1	2	3.31	0.00	1.75	8.00	8.00
2	A5N	2	2	4.38	0.00	0.00	19.90	27.80

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A55J6_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A55 J6\2018 DF
Report generation date: 14/06/2018 11:20:18

« (Default Analysis Set) - 2023 Base + Dev, PM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Direct/Resultant Flows
» Turning Proportions
» Vehicle Mix
» Results
» Lane Results

Summary of junction performance

There are warnings associated with this model run - see the 'Data Errors and Warnings' tables.

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 [Entry Lane Simulation] - 2023 Base + Dev			
Junction 1 - Arm A5N	0.29	1.63	N/A	A
Junction 1 - Arm WBOFF	59.74	264.85	N/A	F
Junction 1 - Arm A5S	5.29	48.06	N/A	E
Junction 2 - Arm A5114	93.61	251.68	N/A	F
Junction 2 - Arm A5S	1.17	4.02	N/A	A
Junction 2 - Arm EBOFF	1.66	21.31	N/A	C
Junction 2 - Arm A5N	0.83	9.33	N/A	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM" model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:15 - 17:45
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM " model duration: 16:15 - 17:45
"D7 - 2023 Base + Dev + Seasonality, AM Aug" model duration: 10:45 - 12:15
"D8 - 2023 Base + Dev + Seasonality, PM Aug" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 11:20:15

File summary

Title	(untitled)
Location	
Site Number	
Date	27/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	RogersA2
Description	

Analysis Options

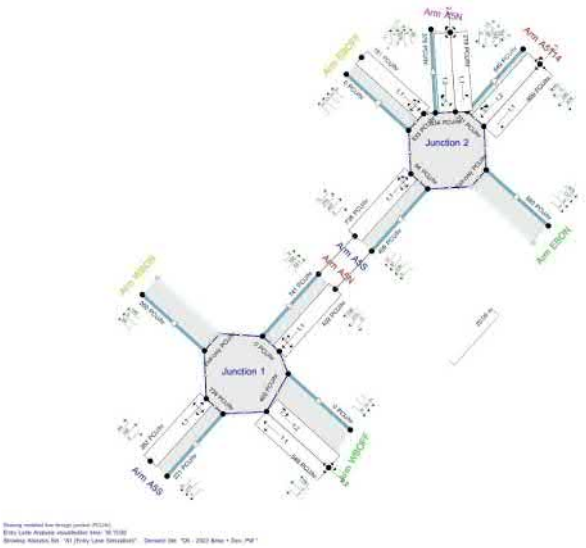
Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Entry Lane Analysis Options

Stop Criteria (%)	Random Seed	Results Refresh Speed (s)	Individual Vehicle Animation Number Of Trials	Time Step Size (s)	Last Run Random Seed	Last Run Number Of Trials
5.00	-1	3	1	10	1813297951	726



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Linked Roundabout	Junction 1 - Arm A5N	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Last Run	Entry Lane Analysis	Junction 1 - Arm WBOFF - Entry Lane Analysis	Arm WBOFF: Queue at end of modelled period is greater than 10 PCU. Delay for these vehicles has NOT been included in calculations. You may want to increase the modelled period to take account of these vehicles.
Warning	Linked Roundabout	Junction 2 - Arm A5S	If the distance between linked junctions is small, results should be treated with caution. The linked junctions will be modelled as separate junctions, but the real behaviour may be that of a complex system with interactions that cannot be modelled.
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Last Run	Entry Lane Analysis	Junction 2 - Arm A5114 - Entry Lane Analysis	Arm A5114: Queue at end of modelled period is greater than 10 PCU. Delay for these vehicles has NOT been included in calculations. You may want to increase the modelled period to take account of these vehicles.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	Entry Lane Simulation		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base + Dev, PM	2023 Base + Dev	PM		Varies by Arm	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	1	A55 J6 WB	Roundabout	A5N,WBOFF,A5S,WBON			130.68	F
2	2	A55 J6 EB	Roundabout	A5114,EBON,A5S,EBOFF,A5N			115.85	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Arm	Name	Description
1	**A5N**	A5N	(untitled)	
1	**WBOFF**	WBOFF	(untitled)	
1	**A5S**	A5S	(untitled)	
1	**WBON**	WBON	(untitled)	
2	**A5114**	A5114	(untitled)	
2	**EBON**	EBON	(untitled)	
2	**A5S**	A5S	(untitled)	
2	**EBOFF**	EBOFF	(untitled)	
2	**A5N**	A5N	(untitled)	

Capacity Options

Junction	Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	**A5N**	0.00	99999.00
1	**WBOFF**	0.00	99999.00
1	**A5S**	0.00	99999.00
1	**WBON**	0.00	99999.00
2	**A5114**	0.00	99999.00
2	**EBON**	0.00	99999.00
2	**A5S**	0.00	99999.00
2	**EBOFF**	0.00	99999.00
2	**A5N**	0.00	99999.00

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	**A5N**	3.50	6.40	4.90	19.50	47.00	34.00	
1	**WBOFF**	5.10	8.10	17.00	27.00	47.00	43.00	
1	**A5S**	3.00	4.00	6.00	18.00	47.00	27.00	
1	**WBON**	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	**A5114**	4.30	8.60	5.00	20.00	48.00	48.00	
2	**EBON**	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
2	**A5S**	3.50	6.40	4.90	18.00	48.00	27.00	
2	**EBOFF**	3.40	6.50	1.00	30.50	48.00	39.00	
2	**A5N**	5.00	10.00	0.10	21.00	48.00	37.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	**A5N**		(calculated)	(calculated)	0.547	1343.496
1	**WBOFF**		(calculated)	(calculated)	0.680	2057.281
1	**A5S**		(calculated)	(calculated)	0.509	1112.116
1	**WBON**		(calculated)	(calculated)	Exit-only	Exit-only
2	**A5114**		(calculated)	(calculated)	0.569	1547.086
2	**EBON**		(calculated)	(calculated)	Exit-only	Exit-only
2	**A5S**		(calculated)	(calculated)	0.555	1370.930
2	**EBOFF**		(calculated)	(calculated)	0.498	1100.148
2	**A5N**		(calculated)	(calculated)	0.570	1490.932

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Junction	Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
1	**A5N**	None			
1	**WBOFF**	Percentage			92.00
1	**A5S**	Percentage			80.00
1	**WBON**	None			
2	**A5114**	Percentage			92.00
2	**EBON**	None			
2	**A5S**	None			
2	**EBOFF**	Percentage			75.00
2	**A5N**	Percentage			97.00

Entry Lane Analysis: Arm options

Junction	Arm	Lane Capacity Source	Traffic Considering Secondary Lanes (%)
1	**A5N**	Evenly split	10.00
1	**WBOFF**	Evenly split	10.00
1	**A5S**	Evenly split	10.00
1	**WBON**	Evenly split	10.00
2	**A5114**	Evenly split	10.00
2	**EBON**	Evenly split	10.00
2	**A5S**	Evenly split	10.00
2	**EBOFF**	Evenly split	10.00
2	**A5N**	Evenly split	10.00

Lanes

Junction	Arm	Lane Level	Lane	Has Limited Storage	Storage (PCU)	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
1	A5N	1	1		Infinity	0.00	99999.00
1	WBOFF	1	1	✓	7.00	0.00	99999.00
1	WBOFF	1	2	✓	7.00	0.00	99999.00
1	WBOFF	2	2		Infinity		
1	A5S	1	1		Infinity	0.00	99999.00
1	WBON	1	1		Infinity	0.00	99999.00
2	A5114	1	1	✓	9.00	0.00	99999.00
2	A5114	1	2	✓	9.00	0.00	99999.00
2	A5114	2	1		Infinity		
2	EBON	1	1		Infinity	0.00	99999.00
2	A5S	1	1		Infinity	0.00	99999.00
2	EBOFF	1	1		Infinity	0.00	99999.00
2	A5N	1	1	✓	8.00	0.00	99999.00
2	A5N	1	2	✓	8.00	0.00	99999.00
2	A5N	2	2		Infinity		

Entry Lane slope and intercept

Junction	Arm	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1	A5N	(calculated)	(calculated)	0.547	1343.496
1	WBOFF	(calculated)	(calculated)	0.340	1028.641
1	WBOFF	(calculated)	(calculated)	0.340	1028.641
1	A5S	(calculated)	(calculated)	0.509	1112.116
1	WBON	(calculated)	(calculated)	Exit-only	Exit-only
2	A5114	(calculated)	(calculated)	0.285	773.543
2	A5114	(calculated)	(calculated)	0.285	773.543
2	EBON	(calculated)	(calculated)	Exit-only	Exit-only
2	A5S	(calculated)	(calculated)	0.555	1370.930
2	EBOFF	(calculated)	(calculated)	0.498	1100.148
2	A5N	(calculated)	(calculated)	0.285	745.466
2	A5N	(calculated)	(calculated)	0.285	745.466

Lane Movements

Junction	Arm	Lane Level	Lane	Arm			
				A5N	WBOFF	A5S	WBON
1	A5N	1	1	✓	✓	✓	✓
1	WBOFF	1	1			✓	✓
1	WBOFF	1	2	✓	✓		
1	WBOFF	2	2	✓	✓	✓	✓
1	A5S	1	1	✓	✓	✓	✓
1	WBON	1	1	✓	✓	✓	✓

Lane Movements

Junction	Arm	Lane Level	Lane	Arm				
				A5114	EBON	A5S	EBOFF	A5N
2	A5114	1	1		✓			
2	A5114	1	2	✓		✓	✓	✓
2	A5114	2	1	✓	✓	✓	✓	✓
2	EBON	1	1	✓	✓	✓	✓	✓
2	A5S	1	1	✓	✓	✓	✓	✓
2	EBOFF	1	1	✓	✓	✓	✓	✓
2	A5N	1	1	✓				
2	A5N	1	2		✓	✓	✓	✓
2	A5N	2	2	✓	✓	✓	✓	✓

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Junction	Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	A5N	Linked Arm		N/A	
1	WBOFF	ONE HOUR	✓	732.00	100.000
1	A5S	ONE HOUR	✓	345.00	100.000
1	WBON	Exit-only	✓	Exit-only	Exit-only
2	A5114	ONE HOUR	✓	1189.00	100.000
2	EBON	Exit-only	✓	Exit-only	Exit-only
2	A5S	Linked Arm		N/A	
2	EBOFF	ONE HOUR	✓	239.00	100.000
2	A5N	ONE HOUR	✓	292.00	100.000

Linked Arm Data

Junction	Arm	From Junction ID	From Arm ID	Link Type	Flow Source	Uniform Flow (PCU/hr)	Flow Multiplier (%)	Internal Storage Space (PCU)
1	A5N	2	A5S	Simple (vertical queueing)	Normal	0.00	100.00	
2	A5S	1	A5N	Simple (vertical queueing)	Normal	0.00	100.00	

Direct/Resultant Flows

Direct Flows Data

Time Segment	Junction	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	1	A5N	0.00	0.00		
16:15-16:30	1	WBOFF	551.09	551.09		
16:15-16:30	1	A5S	259.73	259.73		
16:15-16:30	1	WBON	Exit-only	0.00		
16:30-16:45	1	A5N	0.00	0.00		
16:30-16:45	1	WBOFF	658.05	658.05		
16:30-16:45	1	A5S	310.15	310.15		
16:30-16:45	1	WBON	Exit-only	0.00		
16:45-17:00	1	A5N	0.00	0.00		
16:45-17:00	1	WBOFF	805.95	805.95		
16:45-17:00	1	A5S	379.85	379.85		
16:45-17:00	1	WBON	Exit-only	0.00		
17:00-17:15	1	A5N	0.00	0.00		
17:00-17:15	1	WBOFF	805.95	805.95		
17:00-17:15	1	A5S	379.85	379.85		
17:00-17:15	1	WBON	Exit-only	0.00		
17:15-17:30	1	A5N	0.00	0.00		
17:15-17:30	1	WBOFF	658.05	658.05		
17:15-17:30	1	A5S	310.15	310.15		
17:15-17:30	1	WBON	Exit-only	0.00		
17:30-17:45	1	A5N	0.00	0.00		
17:30-17:45	1	WBOFF	551.09	551.09		
17:30-17:45	1	A5S	259.73	259.73		
17:30-17:45	1	WBON	Exit-only	0.00		
16:15-16:30	2	A5114	895.14	895.14		
16:15-16:30	2	EBON	Exit-only	0.00		
16:15-16:30	2	A5S	0.00	0.00		
16:15-16:30	2	EBOFF	179.93	179.93		
16:15-16:30	2	A5N	219.83	219.83		

16:30-16:45	2	A5114	1068.89	1068.89		
16:30-16:45	2	EBON	Exit-only	0.00		
16:30-16:45	2	A5S	0.00	0.00		
16:30-16:45	2	EBOFF	214.86	214.86		
16:30-16:45	2	A5N	262.50	262.50		
16:45-17:00	2	A5114	1309.11	1309.11		
16:45-17:00	2	EBON	Exit-only	0.00		
16:45-17:00	2	A5S	0.00	0.00		
16:45-17:00	2	EBOFF	263.14	263.14		
16:45-17:00	2	A5N	321.50	321.50		
17:00-17:15	2	A5114	1309.11	1309.11		
17:00-17:15	2	EBON	Exit-only	0.00		
17:00-17:15	2	A5S	0.00	0.00		
17:00-17:15	2	EBOFF	263.14	263.14		
17:00-17:15	2	A5N	321.50	321.50		
17:15-17:30	2	A5114	1068.89	1068.89		
17:15-17:30	2	EBON	Exit-only	0.00		
17:15-17:30	2	A5S	0.00	0.00		
17:15-17:30	2	EBOFF	214.86	214.86		
17:15-17:30	2	A5N	262.50	262.50		
17:30-17:45	2	A5114	895.14	895.14		
17:30-17:45	2	EBON	Exit-only	0.00		
17:30-17:45	2	A5S	0.00	0.00		
17:30-17:45	2	EBOFF	179.93	179.93		
17:30-17:45	2	A5N	219.83	219.83		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.000	0.000	295.000	272.000
	WBOFF	723.000	0.000	9.000	0.000
	A5S	257.000	0.000	0.000	88.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.00	0.00	0.52	0.48
	WBOFF	0.99	0.00	0.01	0.00
	A5S	0.74	0.00	0.00	0.26
	WBON	0.25	0.25	0.25	0.25

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Turning Counts / Proportions (PCU/hr) - Junction 2 (for whole period)

		To				
		A5114	EBON	A5S	EBOFF	A5N
From	A5114	0.000	624.000	438.000	0.000	127.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	631.000	5.000	0.000	0.000	375.000
	EBOFF	180.000	0.000	48.000	0.000	11.000
	A5N	76.000	152.000	64.000	0.000	0.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 2 (for whole period)

		To				
		A5114	EBON	A5S	EBOFF	A5N
From	A5114	0.00	0.52	0.37	0.00	0.11
	EBON	0.20	0.20	0.20	0.20	0.20
	A5S	0.62	0.00	0.00	0.00	0.37
	EBOFF	0.75	0.00	0.20	0.00	0.05
	A5N	0.26	0.52	0.22	0.00	0.00

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	1.000	1.000	1.000	1.000
	WBOFF	1.000	1.000	1.000	1.000
	A5S	1.000	1.000	1.000	1.000
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A5N	WBOFF	A5S	WBON
From	A5N	0.0	0.0	0.0	0.0
	WBOFF	0.0	0.0	0.0	0.0
	A5S	0.0	0.0	0.0	0.0
	WBON	Exit-only	Exit-only	Exit-only	Exit-only

Arm WBON is exit only and so the above grid should be ignored for this Arm.

Average PCU Per Vehicle - Junction 2 (for whole period)

		To				
		A5114	EBON	A5S	EBOFF	A5N
From	A5114	1.000	1.000	1.000	1.000	1.000
	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	1.000	1.000	1.000	1.000	1.000
	EBOFF	1.000	1.000	1.000	1.000	1.000
	A5N	1.000	1.000	1.000	1.000	1.000

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 2 (for whole period)

		To				
		A5114	EBON	A5S	EBOFF	A5N
From	A5114	0.0	0.0	0.0	0.0	0.0
	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	A5S	0.0	0.0	0.0	0.0	0.0
	EBOFF	0.0	0.0	0.0	0.0	0.0
	A5N	0.0	0.0	0.0	0.0	0.0

Arm EBON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Junction	Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)
1	A5N	1.63	0.29	1.75	A	495.43	743.14	18.54	1.50	0.21
1	WBOFF	264.85	59.74	103.90	F	672.31	1008.47	2307.61	137.29	25.64
1	A5S	48.06	5.29	16.23	E	317.98	476.96	212.18	26.69	2.36
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	251.68	93.61	157.70	F	1093.61	1640.41	3646.53	133.38	40.52
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	4.02	1.17	3.00	A	889.37	1334.05	78.24	3.52	0.87
2	EBOFF	21.31	1.66	5.84	C	219.48	329.21	82.20	14.98	0.91
2	A5N	9.33	0.83	3.34	A	266.02	399.03	50.01	7.52	0.56

Main Results for each time segment

Main results: (16:15-16:30)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	409.09	102.27	409.17	741.49	0.00	0.00	0.11	1.119	A
1	WBOFF	548.68	137.17	548.84	0.00	409.17	0.00	1.92	10.944	B
1	A5S	258.02	64.50	261.98	220.91	739.01	0.00	0.57	8.110	A
1	WBON	Exit-only	Exit-only	Exit-only	259.50	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	900.83	225.21	898.84	648.68	200.58	0.00	3.69	13.292	B
2	EBON	Exit-only	Exit-only	Exit-only	579.92	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	741.49	185.37	738.35	409.09	94.38	0.00	0.57	2.480	A
2	EBOFF	184.21	46.05	180.58	0.00	832.73	0.00	0.42	6.836	A
2	A5N	218.93	54.73	218.93	379.26	634.05	0.00	0.33	5.152	A

Main results: (16:30-16:45)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	481.98	120.50	479.26	884.71	0.00	0.00	0.20	1.365	A
1	WBOFF	662.56	165.64	659.59	0.00	479.26	0.00	6.57	28.825	D
1	A5S	319.01	79.75	319.83	258.43	874.55	0.00	1.34	15.208	C
1	WBON	Exit-only	Exit-only	Exit-only	309.67	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1076.78	269.19	1063.47	784.88	241.16	0.00	11.31	30.207	D
2	EBON	Exit-only	Exit-only	Exit-only	698.93	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	884.71	221.18	877.85	481.98	114.88	0.00	0.93	3.204	A
2	EBOFF	217.19	54.30	211.40	0.00	992.73	0.00	0.79	11.466	B
2	A5N	264.05	66.01	264.05	440.91	763.22	0.00	0.52	6.602	A

Main results: (16:45-17:00)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	540.99	135.25	540.74	984.71	0.00	0.20	0.26	1.618	A
1	WBOFF	805.54	201.38	711.57	0.00	540.74	6.57	33.87	109.730	F
1	A5S	381.57	95.39	379.50	288.84	962.98	1.34	4.38	34.616	D
1	WBON	Exit-only	Exit-only	Exit-only	357.77	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1296.28	324.07	1155.21	884.38	299.75	11.31	54.52	110.484	F
2	EBON	Exit-only	Exit-only	Exit-only	777.36	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	984.71	246.18	979.42	540.99	119.75	0.93	1.17	3.944	A
2	EBOFF	258.35	64.59	253.14	0.00	1099.17	0.79	1.57	20.147	C
2	A5N	320.50	80.12	320.41	493.64	858.68	0.52	0.81	9.287	A

Main results: (17:00-17:15)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	549.01	137.25	555.12	976.94	0.00	0.26	0.19	1.627	A
1	WBOFF	805.62	201.40	699.92	0.00	555.12	33.87	59.74	243.144	F
1	A5S	382.56	95.64	381.98	299.59	956.69	4.38	5.29	48.064	E
1	WBON	Exit-only	Exit-only	Exit-only	361.74	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1319.59	329.90	1158.84	878.10	293.47	54.52	93.61	236.331	F
2	EBON	Exit-only	Exit-only	Exit-only	768.43	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	976.94	244.24	972.89	549.01	129.92	1.17	1.10	4.020	A
2	EBOFF	262.73	65.68	262.98	0.00	1102.81	1.57	1.66	21.310	C
2	A5N	318.18	79.55	318.10	513.88	851.90	0.81	0.83	9.330	A

Main results: (17:15-17:30)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	533.80	133.45	531.74	935.79	0.00	0.19	0.29	1.632	A
1	WBOFF	662.56	165.64	700.33	0.00	531.74	59.74	45.16	264.852	F
1	A5S	313.64	78.41	320.74	283.80	950.66	5.29	2.03	29.024	D
1	WBON	Exit-only	Exit-only	Exit-only	335.62	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1068.51	267.13	1151.98	812.73	242.81	93.61	68.55	251.678	F
2	EBON	Exit-only	Exit-only	Exit-only	750.99	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	935.79	233.95	933.64	533.80	130.08	1.10	1.05	3.830	A
2	EBOFF	215.29	53.82	214.46	0.00	1063.72	1.66	0.87	15.625	C
2	A5N	259.83	64.96	259.83	485.37	792.81	0.83	0.54	7.391	A

Main results: (17:30-17:45)

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	457.69	114.42	458.93	812.56	0.00	0.29	0.14	1.417	A
1	WBOFF	548.93	137.23	616.36	0.00	458.93	45.16	14.03	128.774	F
1	A5S	253.06	63.26	263.55	249.17	837.02	2.03	0.83	14.296	B
1	WBON	Exit-only	Exit-only	Exit-only	288.02	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	899.67	224.92	998.51	700.17	201.07	68.55	20.50	120.039	F
2	EBON	Exit-only	Exit-only	Exit-only	656.94	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	812.56	203.14	813.55	457.69	101.57	1.05	0.70	3.317	A
2	EBOFF	179.09	44.77	181.74	0.00	915.12	0.87	0.43	9.893	A
2	A5N	214.63	53.66	214.63	412.40	684.46	0.54	0.30	5.613	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1.91	0.13	1.119	A	A
1	WBOFF	24.70	1.65	10.944	B	B
1	A5S	8.72	0.58	8.110	A	A
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	48.72	3.25	13.292	B	B
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	7.51	0.50	2.480	A	A
2	EBOFF	5.04	0.34	6.836	A	A
2	A5N	4.67	0.31	5.152	A	A

Queueing Delay results: (16:30-16:45)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	2.75	0.18	1.365	A	A
1	WBOFF	75.84	5.06	28.825	D	C
1	A5S	19.46	1.30	15.208	C	B
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	129.10	8.61	30.207	D	C
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	11.49	0.77	3.204	A	A
2	EBOFF	10.13	0.68	11.466	B	B
2	A5N	7.27	0.48	6.602	A	A

Queueing Delay results: (16:45-17:00)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	3.64	0.24	1.618	A	A
1	WBOFF	312.60	20.84	109.730	F	F
1	A5S	51.68	3.45	34.616	D	C
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	513.57	34.24	110.484	F	F
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	15.80	1.05	3.944	A	A
2	EBOFF	21.55	1.44	20.147	C	C
2	A5N	12.24	0.82	9.287	A	A

Queueing Delay results: (17:00-17:15)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	3.72	0.25	1.627	A	A
1	WBOFF	700.87	46.72	243.144	F	F
1	A5S	75.21	5.01	48.064	E	D
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1121.18	74.75	236.331	F	F
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	16.31	1.09	4.020	A	A
2	EBOFF	23.23	1.55	21.310	C	C
2	A5N	12.52	0.83	9.330	A	A

Queueing Delay results: (17:15-17:30)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	3.62	0.24	1.632	A	A
1	WBOFF	778.76	51.92	264.852	F	F
1	A5S	40.66	2.71	29.024	D	C
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1214.55	80.97	251.678	F	F
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	15.05	1.00	3.830	A	A
2	EBOFF	14.48	0.97	15.625	C	B
2	A5N	8.12	0.54	7.391	A	A

Queueing Delay results: (17:30-17:45)

Junction	Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	2.90	0.19	1.417	A	A
1	WBOFF	414.85	27.66	128.774	F	F
1	A5S	16.44	1.10	14.296	B	B
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	619.41	41.29	120.039	F	F
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	12.07	0.80	3.317	A	A
2	EBOFF	7.76	0.52	9.893	A	A
2	A5N	5.19	0.35	5.613	A	A

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.11	0.00	0.00	0.00	0.52
1	WBOFF	1.92	0.00	0.22	5.15	7.23
1	A5S	0.57	0.00	0.00	1.64	2.51
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	3.69	0.00	2.09	8.02	10.86
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.57	0.00	0.00	3.00	3.00
2	EBOFF	0.42	0.00	0.00	0.98	1.82
2	A5N	0.33	0.00	0.00	0.83	1.61

Queue Variation results: (16:30-16:45)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.20	0.00	0.00	0.34	1.20
1	WBOFF	6.57	0.00	3.80	16.24	21.23
1	A5S	1.34	0.00	0.00	3.30	4.92
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	11.31	0.00	7.38	26.57	34.43
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.93	0.00	0.00	3.00	3.00
2	EBOFF	0.79	0.00	0.00	2.29	3.13
2	A5N	0.52	0.00	0.00	1.44	1.98

Queue Variation results: (16:45-17:00)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.26	0.00	0.00	0.69	1.46
1	WBOFF	33.87	6.22	32.29	58.08	64.90
1	A5S	4.38	0.00	2.33	10.49	13.81
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	54.52	13.58	51.33	90.10	102.43
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1.17	0.00	0.17	3.00	3.00
2	EBOFF	1.57	0.00	0.23	3.98	5.25
2	A5N	0.81	0.00	0.00	2.10	3.34

Queue Variation results: (17:00-17:15)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.19	0.00	0.00	0.32	0.99
1	WBOFF	59.74	21.10	57.92	93.57	103.90
1	A5S	5.29	0.00	3.02	12.70	16.23
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	93.61	35.08	95.10	141.85	157.70
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1.10	0.00	0.00	3.00	3.00
2	EBOFF	1.66	0.00	0.23	4.32	5.84
2	A5N	0.83	0.00	0.00	1.95	2.96

Queue Variation results: (17:15-17:30)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.29	0.00	0.00	0.89	1.75
1	WBOFF	45.16	2.53	40.80	85.20	97.85
1	A5S	2.03	0.00	0.43	5.18	7.37
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	68.55	3.41	65.00	127.13	146.35
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1.05	0.00	0.00	3.00	3.00
2	EBOFF	0.87	0.00	0.00	2.42	3.61
2	A5N	0.54	0.00	0.00	1.46	2.10

Queue Variation results: (17:30-17:45)

Junction	Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	0.14	0.00	0.00	0.00	0.76
1	WBOFF	14.03	0.00	3.75	44.35	55.68
1	A5S	0.83	0.00	0.00	2.34	3.46
1	WBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	20.50	0.00	5.84	64.13	89.18
2	EBON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	0.70	0.00	0.00	3.00	3.00
2	EBOFF	0.43	0.00	0.00	1.08	1.97
2	A5N	0.30	0.00	0.00	0.76	1.37

Lane Results

Lanes: Main Results for each time segment

Main results: (16:15-16:30)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	409.09	102.27	409.17	1343.50	0.305	0.00	0.11	1.119	A
1	WBOFF	1	1	7.36	1.84	7.52	818.31	0.009	0.00	0.00	1.296	A
1	WBOFF	1	2	541.49	135.37	543.22	818.31	0.662	0.00	1.74	10.226	B
1	WBOFF	2	2	548.68	137.17	548.84			0.00	0.19	0.795	A
1	A5S	1	1	258.02	64.50	261.98	588.95	0.438	0.00	0.57	8.110	A
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	473.97	118.49	462.31	659.12	0.719	0.00	1.98	13.707	B
2	A5114	1	2	424.88	106.22	420.50	659.12	0.645	0.00	1.50	11.554	B
2	A5114	2	1	900.83	225.21	898.84			0.00	0.22	0.592	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	741.49	185.37	738.35	1318.53	0.562	0.00	0.57	2.480	A
2	EBOFF	1	1	184.21	46.05	180.58	514.34	0.358	0.00	0.42	6.836	A
2	A5N	1	1	55.37	13.84	54.79	547.70	0.101	0.00	0.05	3.577	A
2	A5N	1	2	163.55	40.89	160.41	547.70	0.299	0.00	0.28	5.700	A
2	A5N	2	2	218.93	54.73	218.93			0.00	0.00	0.000	A

Main results: (16:30-16:45)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	481.98	120.50	479.26	1343.50	0.359	0.11	0.20	1.365	A
1	WBOFF	1	1	8.18	2.05	7.93	796.39	0.010	0.00	0.01	1.336	A
1	WBOFF	1	2	651.40	162.85	645.79	796.39	0.818	1.74	4.02	19.773	C
1	WBOFF	2	2	662.56	165.64	659.59			0.19	2.54	9.061	A
1	A5S	1	1	319.01	79.75	319.83	533.79	0.598	0.57	1.34	15.208	C
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	558.76	139.69	555.79	648.49	0.862	1.98	4.36	24.968	C
2	A5114	1	2	504.71	126.18	498.84	648.49	0.778	1.50	3.06	19.174	C
2	A5114	2	1	1076.78	269.19	1063.47			0.22	3.88	7.770	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	884.71	221.18	877.85	1307.15	0.677	0.57	0.93	3.204	A
2	EBOFF	1	1	217.19	54.30	211.40	454.63	0.478	0.42	0.79	11.466	B
2	A5N	1	1	69.50	17.38	69.67	511.97	0.136	0.05	0.10	4.310	A
2	A5N	1	2	194.55	48.64	193.14	511.97	0.380	0.28	0.41	7.396	A
2	A5N	2	2	264.05	66.01	264.05			0.00	0.00	0.002	A

Main results: (16:45-17:00)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	540.99	135.25	540.74	1343.50	0.403	0.20	0.26	1.618	A
1	WBOFF	1	1	8.02	2.00	7.93	777.14	0.010	0.01	0.00	1.429	A
1	WBOFF	1	2	703.55	175.89	703.14	777.14	0.905	4.02	6.82	32.667	D
1	WBOFF	2	2	805.54	201.38	711.57			2.54	27.05	76.971	F
1	A5S	1	1	381.57	95.39	379.50	497.81	0.767	1.34	4.38	34.616	D
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	615.04	153.76	604.05	633.15	0.971	4.36	7.15	39.287	E
2	A5114	1	2	540.17	135.04	534.30	633.15	0.853	3.06	5.35	32.524	D
2	A5114	2	1	1296.28	324.07	1155.21			3.88	42.02	74.033	F
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	984.71	246.18	979.42	1304.44	0.755	0.93	1.17	3.944	A
2	EBOFF	1	1	258.35	64.59	253.14	414.90	0.623	0.79	1.57	20.147	C
2	A5N	1	1	79.26	19.81	81.49	485.56	0.163	0.10	0.09	5.049	A
2	A5N	1	2	241.16	60.29	243.97	485.56	0.497	0.41	0.71	10.724	B
2	A5N	2	2	320.50	80.12	320.41			0.00	0.01	0.044	A

Main results: (17:00-17:15)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	549.01	137.25	555.12	1343.50	0.409	0.26	0.19	1.627	A
1	WBOFF	1	1	8.60	2.15	8.68	772.65	0.011	0.00	0.00	1.351	A
1	WBOFF	1	2	691.32	172.83	692.48	772.65	0.895	6.82	6.94	35.940	E
1	WBOFF	2	2	805.62	201.40	699.92			27.05	52.80	207.839	F
1	A5S	1	1	382.56	95.64	381.98	500.36	0.765	4.38	5.29	48.064	E
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	601.98	150.50	597.52	634.79	0.948	7.15	7.23	42.675	E
2	A5114	1	2	556.86	139.21	556.36	634.79	0.877	5.35	5.46	35.641	E
2	A5114	2	1	1319.59	329.90	1158.84			42.02	80.92	197.150	F
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	976.94	244.24	972.89	1298.80	0.752	1.17	1.10	4.020	A
2	EBOFF	1	1	262.73	65.68	262.98	413.54	0.635	1.57	1.66	21.310	C
2	A5N	1	1	86.45	21.61	84.71	487.44	0.177	0.09	0.15	5.308	A
2	A5N	1	2	231.65	57.91	234.96	487.44	0.475	0.71	0.67	10.722	B
2	A5N	2	2	318.18	79.55	318.10			0.01	0.00	0.037	A

Main results: (17:15-17:30)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	533.80	133.45	531.74	1343.50	0.397	0.19	0.29	1.632	A
1	WBOFF	1	1	7.93	1.98	7.93	779.96	0.010	0.00	0.00	1.498	A
1	WBOFF	1	2	692.40	173.10	694.79	779.96	0.888	6.94	6.62	34.825	D
1	WBOFF	2	2	662.56	165.64	700.33			52.80	38.54	230.614	F
1	A5S	1	1	313.64	78.41	320.74	502.82	0.624	5.29	2.03	29.024	D
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	606.78	151.69	610.91	648.06	0.936	7.23	6.68	40.880	E
2	A5114	1	2	545.21	136.30	561.16	648.06	0.841	5.46	5.00	34.636	D
2	A5114	2	1	1068.51	267.13	1151.98			80.92	56.87	214.002	F
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	935.79	233.95	933.64	1298.71	0.721	1.10	1.05	3.830	A
2	EBOFF	1	1	215.29	53.82	214.46	428.13	0.503	1.66	0.87	15.625	C
2	A5N	1	1	68.51	17.13	69.67	503.78	0.136	0.15	0.08	4.414	A
2	A5N	1	2	191.32	47.83	193.06	503.78	0.380	0.67	0.46	8.435	A
2	A5N	2	2	259.83	64.96	259.83			0.00	0.00	0.003	A

Main results: (17:30-17:45)

Junction	Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	A5N	1	1	457.69	114.42	458.93	1343.50	0.341	0.29	0.14	1.417	A
1	WBOFF	1	1	8.84	2.21	8.84	802.75	0.011	0.00	0.00	1.498	A
1	WBOFF	1	2	607.52	151.88	618.43	802.75	0.757	6.62	3.85	28.242	D
1	WBOFF	2	2	548.93	137.23	616.36			38.54	10.18	103.378	F
1	A5S	1	1	253.06	63.26	263.55	549.06	0.461	2.03	0.83	14.296	B
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	525.70	131.43	539.17	658.99	0.798	6.68	3.99	33.541	D
2	A5114	1	2	472.81	118.20	475.95	658.99	0.717	5.00	2.88	27.075	D
2	A5114	2	1	899.67	224.92	998.51			56.87	13.63	91.942	F
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	812.56	203.14	813.55	1314.54	0.618	1.05	0.70	3.317	A
2	EBOFF	1	1	179.09	44.77	181.74	483.59	0.370	0.87	0.43	9.893	A
2	A5N	1	1	54.21	13.55	55.95	533.76	0.102	0.08	0.04	3.956	A
2	A5N	1	2	160.41	40.10	160.83	533.76	0.301	0.46	0.27	6.200	A
2	A5N	2	2	214.63	53.66	214.63			0.00	0.00	0.000	A

Lanes: Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	1.91	0.13	1.119	A	A
1	WBOFF	1	1	0.04	0.00	1.296	A	A
1	WBOFF	1	2	22.88	1.53	10.226	B	B
1	WBOFF	2	2	1.78	0.12	0.795	A	A
1	A5S	1	1	8.72	0.58	8.110	A	A
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	26.35	1.76	13.707	B	B
2	A5114	1	2	20.22	1.35	11.554	B	B
2	A5114	2	1	2.15	0.14	0.592	A	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	7.51	0.50	2.480	A	A
2	EBOFF	1	1	5.04	0.34	6.836	A	A
2	A5N	1	1	0.84	0.06	3.577	A	A
2	A5N	1	2	3.83	0.26	5.700	A	A
2	A5N	2	2	0.00	0.00	0.000	A	A

Queueing Delay results: (16:30-16:45)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	2.75	0.18	1.365	A	A
1	WBOFF	1	1	0.04	0.00	1.336	A	A
1	WBOFF	1	2	52.13	3.48	19.773	C	B
1	WBOFF	2	2	23.67	1.58	9.061	A	A
1	A5S	1	1	19.46	1.30	15.208	C	B
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	56.82	3.79	24.968	C	C
2	A5114	1	2	39.52	2.63	19.174	C	B
2	A5114	2	1	32.75	2.18	7.770	A	A
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	11.49	0.77	3.204	A	A
2	EBOFF	1	1	10.13	0.68	11.466	B	B
2	A5N	1	1	1.22	0.08	4.310	A	A
2	A5N	1	2	6.04	0.40	7.396	A	A
2	A5N	2	2	0.00	0.00	0.002	A	A

Queueing Delay results: (16:45-17:00)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	3.64	0.24	1.618	A	A
1	WBOFF	1	1	0.05	0.00	1.429	A	A
1	WBOFF	1	2	94.56	6.30	32.667	D	C
1	WBOFF	2	2	217.98	14.53	76.971	F	E
1	A5S	1	1	51.68	3.45	34.616	D	C
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	97.89	6.53	39.287	E	D
2	A5114	1	2	73.41	4.89	32.524	D	C
2	A5114	2	1	342.27	22.82	74.033	F	E
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	15.80	1.05	3.944	A	A
2	EBOFF	1	1	21.55	1.44	20.147	C	C
2	A5N	1	1	1.75	0.12	5.049	A	A
2	A5N	1	2	10.43	0.70	10.724	B	B
2	A5N	2	2	0.06	0.00	0.044	A	A

Queueing Delay results: (17:00-17:15)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	3.72	0.25	1.627	A	A
1	WBOFF	1	1	0.05	0.00	1.351	A	A
1	WBOFF	1	2	103.56	6.90	35.940	E	D
1	WBOFF	2	2	597.26	39.82	207.839	F	F
1	A5S	1	1	75.21	5.01	48.064	E	D
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	107.10	7.14	42.675	E	D
2	A5114	1	2	81.41	5.43	35.641	E	D
2	A5114	2	1	932.67	62.18	197.150	F	F
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	16.31	1.09	4.020	A	A
2	EBOFF	1	1	23.23	1.55	21.310	C	C
2	A5N	1	1	1.87	0.12	5.308	A	A
2	A5N	1	2	10.60	0.71	10.722	B	B
2	A5N	2	2	0.05	0.00	0.037	A	A

Queueing Delay results: (17:15-17:30)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	3.62	0.24	1.632	A	A
1	WBOFF	1	1	0.05	0.00	1.498	A	A
1	WBOFF	1	2	102.01	6.80	34.825	D	C
1	WBOFF	2	2	676.69	45.11	230.614	F	F
1	A5S	1	1	40.66	2.71	29.024	D	C
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	104.28	6.95	40.880	E	D
2	A5114	1	2	80.33	5.36	34.636	D	C
2	A5114	2	1	1029.95	68.66	214.002	F	F
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	15.05	1.00	3.830	A	A
2	EBOFF	1	1	14.48	0.97	15.625	C	B
2	A5N	1	1	1.26	0.08	4.414	A	A
2	A5N	1	2	6.86	0.46	8.435	A	A
2	A5N	2	2	0.00	0.00	0.003	A	A

Queueing Delay results: (17:30-17:45)

Junction	Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	A5N	1	1	2.90	0.19	1.417	A	A
1	WBOFF	1	1	0.05	0.00	1.498	A	A
1	WBOFF	1	2	78.82	5.25	28.242	D	C
1	WBOFF	2	2	335.98	22.40	103.378	F	F
1	A5S	1	1	16.44	1.10	14.296	B	B
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	80.47	5.36	33.541	D	C
2	A5114	1	2	59.03	3.94	27.075	D	C
2	A5114	2	1	479.91	31.99	91.942	F	F
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	12.07	0.80	3.317	A	A
2	EBOFF	1	1	7.76	0.52	9.893	A	A
2	A5N	1	1	0.94	0.06	3.956	A	A
2	A5N	1	2	4.24	0.28	6.200	A	A
2	A5N	2	2	0.00	0.00	0.000	A	A

Lanes: Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.11	0.00	0.00	0.00	0.52
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	1.74	0.00	0.22	5.15	7.00
1	WBOFF	2	2	0.19	0.00	0.00	0.00	0.23
1	A5S	1	1	0.57	0.00	0.00	1.64	2.51
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	1.98	0.00	0.52	5.35	6.98
2	A5114	1	2	1.50	0.00	0.00	4.26	6.07
2	A5114	2	1	0.22	0.00	0.00	0.00	0.00
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.57	0.00	0.00	3.00	3.00
2	EBOFF	1	1	0.42	0.00	0.00	0.98	1.82
2	A5N	1	1	0.05	0.00	0.00	0.00	0.00
2	A5N	1	2	0.28	0.00	0.00	0.70	1.43
2	A5N	2	2	0.00	0.00	0.00	0.00	0.00

Queue Variation results: (16:30-16:45)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.20	0.00	0.00	0.34	1.20
1	WBOFF	1	1	0.01	0.00	0.00	0.00	0.00
1	WBOFF	1	2	4.02	0.00	3.80	7.00	7.00
1	WBOFF	2	2	2.54	0.00	0.00	9.24	14.23
1	A5S	1	1	1.34	0.00	0.00	3.30	4.92
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	4.36	0.00	3.26	9.00	9.00
2	A5114	1	2	3.06	0.00	1.63	9.00	9.00
2	A5114	2	1	3.88	0.00	0.00	14.16	20.90
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.93	0.00	0.00	3.00	3.00
2	EBOFF	1	1	0.79	0.00	0.00	2.29	3.13
2	A5N	1	1	0.10	0.00	0.00	0.00	0.51
2	A5N	1	2	0.41	0.00	0.00	1.18	1.86
2	A5N	2	2	0.00	0.00	0.00	0.00	0.00

Queue Variation results: (16:45-17:00)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.26	0.00	0.00	0.69	1.46
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	6.82	7.00	7.00	7.00	7.00
1	WBOFF	2	2	27.05	0.00	25.29	51.08	57.90
1	A5S	1	1	4.38	0.00	2.33	10.49	13.81
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	7.15	0.00	9.00	9.00	9.00
2	A5114	1	2	5.35	0.00	5.79	9.00	9.00
2	A5114	2	1	42.02	0.08	39.29	77.85	88.85
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	1.17	0.00	0.17	3.00	3.00
2	EBOFF	1	1	1.57	0.00	0.23	3.98	5.25
2	A5N	1	1	0.09	0.00	0.00	0.00	0.42
2	A5N	1	2	0.71	0.00	0.00	1.91	3.24
2	A5N	2	2	0.01	0.00	0.00	0.00	0.00

Queue Variation results: (17:00-17:15)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.19	0.00	0.00	0.32	0.99
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	6.94	7.00	7.00	7.00	7.00
1	WBOFF	2	2	52.80	14.10	50.92	86.57	96.90
1	A5S	1	1	5.29	0.00	3.02	12.70	16.23
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	7.23	0.00	9.00	9.00	9.00
2	A5114	1	2	5.46	0.00	5.88	9.00	9.00
2	A5114	2	1	80.92	21.30	81.25	130.60	143.70
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	1.10	0.00	0.00	3.00	3.00
2	EBOFF	1	1	1.66	0.00	0.23	4.32	5.84
2	A5N	1	1	0.15	0.00	0.00	0.23	0.73
2	A5N	1	2	0.67	0.00	0.00	1.81	2.81
2	A5N	2	2	0.00	0.00	0.00	0.00	0.00

Queue Variation results: (17:15-17:30)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.29	0.00	0.00	0.89	1.75
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	6.62	2.53	7.00	7.00	7.00
1	WBOFF	2	2	38.54	0.00	33.80	78.20	90.85
1	A5S	1	1	2.03	0.00	0.43	5.18	7.37
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	6.68	0.00	9.00	9.00	9.00
2	A5114	1	2	5.00	0.00	4.83	9.00	9.00
2	A5114	2	1	56.87	0.00	52.33	113.20	135.85
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	1.05	0.00	0.00	3.00	3.00
2	EBOFF	1	1	0.87	0.00	0.00	2.42	3.61
2	A5N	1	1	0.08	0.00	0.00	0.00	0.31
2	A5N	1	2	0.46	0.00	0.00	1.18	1.97
2	A5N	2	2	0.00	0.00	0.00	0.00	0.00

Queue Variation results: (17:30-17:45)

Junction	Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
1	A5N	1	1	0.14	0.00	0.00	0.00	0.76
1	WBOFF	1	1	0.00	0.00	0.00	0.00	0.00
1	WBOFF	1	2	3.85	0.00	3.75	7.00	7.00
1	WBOFF	2	2	10.18	0.00	0.00	37.35	48.68
1	A5S	1	1	0.83	0.00	0.00	2.34	3.46
1	WBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5114	1	1	3.99	0.00	2.35	9.00	9.00
2	A5114	1	2	2.88	0.00	0.87	9.00	9.00
2	A5114	2	1	13.63	0.00	0.00	50.60	75.35
2	EBON	1	1	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
2	A5S	1	1	0.70	0.00	0.00	3.00	3.00
2	EBOFF	1	1	0.43	0.00	0.00	1.08	1.97
2	A5N	1	1	0.04	0.00	0.00	0.00	0.00
2	A5N	1	2	0.27	0.00	0.00	0.67	1.29
2	A5N	2	2	0.00	0.00	0.00	0.00	0.00

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A55J7_FINAL_ADVANCED.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A55 J7\2018 DF
Report generation date: 14/06/2018 11:38:48

» (Default Analysis Set) - 2017 Base, AM
» (Default Analysis Set) - 2017 Base, PM
» (Default Analysis Set) - 2023 Base, AM
» (Default Analysis Set) - 2023 Base, PM
» (Default Analysis Set) - 2023 Base + Dev, AM
» (Default Analysis Set) - 2023 Base + Dev, PM
» (Default Analysis Set) - 2023 Base + Dev + seasonality, PM Aug

Summary of junction performance

	AM				PM				PM Aug			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2017 Base											
Stream B-C	0.00	0.00	0.00	A	0.00	0.00	0.00	A				
Stream B-AD	0.00	0.00	0.00	A	0.00	0.00	0.00	A				
Stream A-B	-	-	-	-	-	-	-	-				
Stream A-C	-	-	-	-	-	-	-	-				
Stream A-D	0.00	0.00	0.00	A	0.00	0.00	0.00	A				
Stream D-A	0.00	4.84	0.00	A	0.01	4.79	0.01	A				
Stream D-BC	0.29	6.52	0.22	A	0.21	6.11	0.17	A				
Stream C-ABD	0.39	8.03	0.28	A	0.66	9.42	0.40	A				
Stream C-D	-	-	-	-	-	-	-	-				
Stream C-A	-	-	-	-	-	-	-	-				
	A1 - 2023 Base											
Stream B-C	0.00	0.00	0.00	A	0.00	0.00	0.00	A				
Stream B-AD	0.00	0.00	0.00	A	0.00	0.00	0.00	A				
Stream A-B	-	-	-	-	-	-	-	-				
Stream A-C	-	-	-	-	-	-	-	-				
Stream A-D	0.00	0.00	0.00	A	0.00	0.00	0.00	A				
Stream D-A	0.00	4.86	0.00	A	0.01	4.80	0.01	A				
Stream D-BC	0.31	6.63	0.24	A	0.22	6.19	0.18	A				
Stream C-ABD	0.42	8.25	0.30	A	0.72	9.81	0.42	A				
Stream C-D	-	-	-	-	-	-	-	-				
Stream C-A	-	-	-	-	-	-	-	-				
	A1 - 2023 Base + Dev											
Stream B-C	0.00	0.00	0.00	A	0.00	0.00	0.00	A				
Stream B-AD	0.00	0.00	0.00	A	0.00	0.00	0.00	A				
Stream A-B	-	-	-	-	-	-	-	-				

Stream A-C	-	-	-	-	-	-	-	-				
Stream A-D	0.00	0.00	0.00	A	0.00	0.00	0.00	A				
Stream D-A	0.00	4.86	0.00	A	0.01	4.80	0.01	A				
Stream D-BC	0.31	6.63	0.24	A	0.22	6.18	0.18	A				
Stream C-ABD	0.92	11.16	0.48	B	1.46	14.14	0.60	B				
Stream C-D	-	-	-	-	-	-	-	-				
Stream C-A	-	-	-	-	-	-	-	-				
	A1 - 2023 Base + Dev + seasonality											
Stream B-C									0.00	0.00	0.00	A
Stream B-AD									0.00	0.00	0.00	A
Stream A-B									-	-	-	-
Stream A-C									-	-	-	-
Stream A-D									0.00	0.00	0.00	A
Stream D-A									0.01	4.91	0.01	A
Stream D-BC									0.32	6.71	0.25	A
Stream C-ABD									2.97	23.42	0.76	C
Stream C-D									-	-	-	-
Stream C-A									-	-	-	-

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:00 - 17:30
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:00 - 17:30
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:00 - 17:30
"D8 - 2023 Base + Dev + seasonality, PM Aug" model duration: 16:00 - 17:30

Run using Junctions 8.0.6.541 at 14/06/2018 11:38:38

File summary

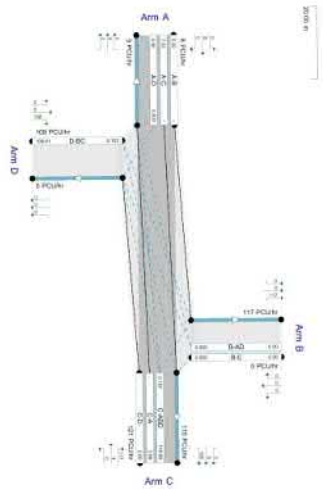
Title	J7 East
Location	
Site Number	
Date	07/04/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	Rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base, AM	2017 Base	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	J7 A55	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		7.29	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	Unclassified Road		Major
B	B	A55 E/B On		Minor
C	C	A5152		Major
D	D	A55 E/B Off		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.06		0.00		2.20	224.63		
C	7.06		0.00		2.20	149.70	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.75	5.44	4.86	4.47	✓	3.00	168	234
D	One lane plus flare				10.00	10.00	5.20	4.01	3.78	✓	2.00	87	222

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	704.048	-	-	-	0.260	0.260	0.260	-	0.260	-	-
1	B-AD	679.496	0.118	0.298	-	-	-	0.188	0.426	0.188	0.118	0.298
1	B-C	798.749	0.117	0.295	-	-	-	-	-	-	0.117	0.295
1	C-B	660.657	0.244	0.244	-	-	-	-	-	-	0.244	0.244
1	D-A	794.337	-	-	-	0.294	0.116	0.294	-	0.116	-	-
1	D-BC	714.875	0.198	0.198	0.448	0.314	0.124	0.314	-	0.124	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	10.00	100.000
B	ONE HOUR	✓	0.00	100.000
C	ONE HOUR	✓	162.00	100.000
D	ONE HOUR	✓	146.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	0.000	10.000	0.000
	B	0.000	0.000	0.000	0.000
	C	5.000	157.000	0.000	0.000
	D	2.000	0.000	144.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.00	1.00	0.00
	B	0.25	0.25	0.25	0.25
	C	0.03	0.97	0.00	0.00
	D	0.01	0.00	0.99	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B-AD	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A-B	-	-	-	-	-	0.00	0.00	-	-	-	-	-
A-C	-	-	-	-	-	9.18	13.76	-	-	-	-	-
A-D	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D-A	0.00	4.84	0.00	−1	A	1.84	2.75	0.22	4.76	0.00	0.22	4.76
D-BC	0.22	6.52	0.29	−1	A	132.14	198.21	20.49	6.20	0.23	20.49	6.20
C-ABD	0.28	8.03	0.39	−1	A	145.16	217.74	27.41	7.55	0.30	27.41	7.55
C-D	-	-	-	-	-	0.00	0.00	-	-	-	-	-
C-A	-	-	-	-	-	3.49	5.24	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	764.52	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	593.81	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	7.53	1.88	7.53	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	703.07	0.000	0.00	0.00	0.000	A
D-A	1.51	0.38	1.50	0.00	762.64	0.002	0.00	0.00	4.729	A
D-BC	108.41	27.10	107.70	0.00	712.21	0.152	0.00	0.18	5.951	A
C-ABD	118.90	29.73	117.99	0.00	634.79	0.187	0.00	0.23	6.955	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.06	0.76	3.06	0.00	-	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	757.67	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	576.57	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	8.99	2.25	8.99	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.88	0.000	0.00	0.00	0.000	A
D-A	1.80	0.45	1.80	0.00	755.92	0.002	0.00	0.00	4.773	A
D-BC	129.45	32.36	129.28	0.00	711.69	0.182	0.18	0.22	6.179	A
C-ABD	142.16	35.54	141.92	0.00	629.61	0.226	0.23	0.29	7.378	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.47	0.87	3.47	0.00	-	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	748.43	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	553.43	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	11.01	2.75	11.01	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.61	0.000	0.00	0.00	0.000	A
D-A	2.20	0.55	2.20	0.00	746.41	0.003	0.00	0.00	4.836	A
D-BC	158.55	39.64	158.29	0.00	710.97	0.223	0.22	0.28	6.510	A
C-ABD	174.41	43.60	174.02	0.00	622.66	0.280	0.29	0.39	8.018	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.95	0.99	3.95	0.00	-	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	748.36	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	553.19	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	11.01	2.75	11.01	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.61	0.000	0.00	0.00	0.000	A
D-A	2.20	0.55	2.20	0.00	746.33	0.003	0.00	0.00	4.837	A
D-BC	158.55	39.64	158.54	0.00	710.97	0.223	0.28	0.29	6.516	A
C-ABD	174.41	43.60	174.41	0.00	622.60	0.280	0.39	0.39	8.032	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.95	0.99	3.95	0.00	-	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	757.54	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	576.18	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	8.99	2.25	8.99	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.88	0.000	0.00	0.00	0.000	A
D-A	1.80	0.45	1.80	0.00	755.79	0.002	0.00	0.00	4.776	A
D-BC	129.45	32.36	129.70	0.00	711.68	0.182	0.29	0.22	6.187	A
C-ABD	142.17	35.54	142.54	0.00	629.51	0.226	0.39	0.30	7.397	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.47	0.87	3.47	0.00	-	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	764.26	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	593.04	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	7.53	1.88	7.53	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	703.07	0.000	0.00	0.00	0.000	A
D-A	1.51	0.38	1.51	0.00	762.38	0.002	0.00	0.00	4.732	A
D-BC	108.41	27.10	108.58	0.00	712.20	0.152	0.22	0.18	5.965	A
C-ABD	118.91	29.73	119.16	0.00	634.58	0.187	0.30	0.23	6.990	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.05	0.76	3.05	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.03	0.00	4.729	A	A
D-BC	2.59	0.17	5.951	A	A
C-ABD	3.41	0.23	6.955	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:00-08:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.04	0.00	4.773	A	A
D-BC	3.25	0.22	6.179	A	A
C-ABD	4.38	0.29	7.378	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:15-08:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.04	0.00	4.836	A	A
D-BC	4.17	0.28	6.510	A	A
C-ABD	5.83	0.39	8.018	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:30-08:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.04	0.00	4.837	A	A
D-BC	4.28	0.29	6.516	A	A
C-ABD	5.87	0.39	8.032	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:45-09:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.04	0.00	4.776	A	A
D-BC	3.43	0.23	6.187	A	A
C-ABD	4.43	0.30	7.397	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (09:00-09:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.03	0.00	4.732	A	A
D-BC	2.77	0.18	5.965	A	A
C-ABD	3.49	0.23	6.990	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.18	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.23	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.22	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.29	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.28	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.39	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.29	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.39	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.22	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.30	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.18	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.23	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base, PM	2017 Base	PM		ONE HOUR	16:00	17:30	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	J7 A55	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		8.28	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	Unclassified Road		Major
B	B	A55 E/B On		Minor
C	C	A5152		Major
D	D	A55 E/B Off		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.06		0.00		2.20	224.63		
C	7.06		0.00		2.20	149.70	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.75	5.44	4.86	4.47	✓	3.00	168	234
D	One lane plus flare				10.00	10.00	5.20	4.01	3.78	✓	2.00	87	222

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	704.048	-	-	-	0.260	0.260	0.260	-	0.260	-	-
1	B-AD	679.496	0.118	0.298	-	-	-	0.188	0.426	0.188	0.118	0.298
1	B-C	798.749	0.117	0.295	-	-	-	-	-	-	0.117	0.295
1	C-B	660.657	0.244	0.244	-	-	-	-	-	-	0.244	0.244
1	D-A	794.845	-	-	-	0.294	0.116	0.294	-	0.116	-	-
1	D-BC	714.628	0.197	0.197	0.448	0.314	0.124	0.314	-	0.124	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	3.00	100.000
B	ONE HOUR	✓	0.00	100.000
C	ONE HOUR	✓	233.00	100.000
D	ONE HOUR	✓	117.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	1.000	2.000	0.000
	B	0.000	0.000	0.000	0.000
	C	6.000	227.000	0.000	0.000
	D	5.000	0.000	112.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.33	0.67	0.00
	B	0.25	0.25	0.25	0.25
	C	0.03	0.97	0.00	0.00
	D	0.04	0.00	0.96	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B-AD	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A-B	-	-	-	-	-	0.00	0.00	-	-	-	-	-
A-C	-	-	-	-	-	0.00	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D-A	0.01	4.79	0.01	−1	A	4.59	6.88	0.54	4.72	0.01	0.54	4.72
D-BC	0.17	6.11	0.21	−1	A	102.77	154.16	15.12	5.88	0.17	15.12	5.88
C-ABD	0.40	9.42	0.66	1.00	A	210.17	315.26	45.12	8.59	0.50	45.13	8.59
C-D	-	-	-	-	-	0.00	0.00	-	-	-	-	-
C-A	-	-	-	-	-	3.63	5.45	-	-	-	-	-

Main Results for each time segment

Main results: (16:00-16:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	773.86	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	580.64	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.87	0.000	0.00	0.00	0.000	A
D-A	3.76	0.94	3.74	0.00	769.92	0.005	0.00	0.00	4.698	A
D-BC	84.32	21.08	83.79	0.00	713.21	0.118	0.00	0.13	5.714	A
C-ABD	172.11	43.03	170.65	0.00	642.98	0.268	0.00	0.36	7.599	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.31	0.83	3.31	0.00	-	-	-	-	-	-

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	768.87	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	560.67	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.64	0.000	0.00	0.00	0.000	A
D-A	4.49	1.12	4.49	0.00	764.80	0.006	0.00	0.01	4.734	A
D-BC	100.69	25.17	100.57	0.00	712.93	0.141	0.13	0.16	5.877	A
C-ABD	205.81	51.45	205.38	0.00	639.44	0.322	0.36	0.47	8.285	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.65	0.91	3.65	0.00	-	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	762.15	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	533.93	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.33	0.000	0.00	0.00	0.000	A
D-A	5.51	1.38	5.50	0.00	757.74	0.007	0.01	0.01	4.785	A
D-BC	123.31	30.83	123.14	0.00	712.55	0.173	0.16	0.21	6.106	A
C-ABD	252.58	63.14	251.84	0.00	634.69	0.398	0.47	0.65	9.385	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.96	0.99	3.96	0.00	-	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	762.10	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	533.56	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.32	0.000	0.00	0.00	0.000	A
D-A	5.51	1.38	5.50	0.00	757.68	0.007	0.01	0.01	4.785	A
D-BC	123.31	30.83	123.31	0.00	712.55	0.173	0.21	0.21	6.108	A
C-ABD	252.58	63.15	252.56	0.00	634.66	0.398	0.65	0.66	9.421	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.95	0.99	3.95	0.00	-	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	768.78	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	560.08	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.64	0.000	0.00	0.00	0.000	A
D-A	4.49	1.12	4.50	0.00	764.70	0.006	0.01	0.01	4.735	A
D-BC	100.69	25.17	100.86	0.00	712.93	0.141	0.21	0.17	5.884	A
C-ABD	205.82	51.46	206.53	0.00	639.38	0.322	0.66	0.48	8.330	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.64	0.91	3.64	0.00	-	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	773.66	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	579.62	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.87	0.000	0.00	0.00	0.000	A
D-A	3.76	0.94	3.77	0.00	769.72	0.005	0.01	0.00	4.699	A
D-BC	84.32	21.08	84.44	0.00	713.21	0.118	0.17	0.14	5.728	A
C-ABD	172.12	43.03	172.57	0.00	642.83	0.268	0.48	0.37	7.662	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.30	0.82	3.30	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (16:00-16:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.07	0.00	4.698	A	A
D-BC	1.94	0.13	5.714	A	A
C-ABD	5.38	0.36	7.599	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:15-16:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.09	0.01	4.734	A	A
D-BC	2.41	0.16	5.877	A	A
C-ABD	7.11	0.47	8.285	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:30-16:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.11	0.01	4.785	A	A
D-BC	3.05	0.20	6.106	A	A
C-ABD	9.88	0.66	9.385	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:45-17:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.11	0.01	4.785	A	A
D-BC	3.12	0.21	6.108	A	A
C-ABD	9.97	0.66	9.421	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:00-17:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.09	0.01	4.735	A	A
D-BC	2.53	0.17	5.884	A	A
C-ABD	7.23	0.48	8.330	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:15-17:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.08	0.01	4.699	A	A
D-BC	2.06	0.14	5.728	A	A
C-ABD	5.55	0.37	7.662	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:00-16:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1			N/A	N/A
D-A	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.13	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.36	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:15-16:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1			N/A	N/A
D-A	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.16	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.47	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1			N/A	N/A
D-A	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.21	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.65	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1			N/A	N/A
D-A	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.21	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.66	0.00	0.00	0.00	1.00			N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1			N/A	N/A
D-A	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.17	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.48	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1			N/A	N/A
D-A	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.37	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base, AM	2023 Base	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	J7 A55	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		7.46	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	Unclassified Road		Major
B	B	A55 E/B On		Minor
C	C	A5152		Major
D	D	A55 E/B Off		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.06		0.00		2.20	224.63		
C	7.06		0.00		2.20	149.70	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.75	5.44	4.86	4.47	✓	3.00	168	234
D	One lane plus flare				10.00	10.00	5.20	4.01	3.78	✓	2.00	87	222

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	704.048	-	-	-	0.260	0.260	0.260	-	0.260	-	-
1	B-AD	679.496	0.118	0.298	-	-	-	0.188	0.426	0.188	0.118	0.298
1	B-C	798.749	0.117	0.295	-	-	-	-	-	-	0.117	0.295
1	C-B	660.657	0.244	0.244	-	-	-	-	-	-	0.244	0.244
1	D-A	794.337	-	-	-	0.294	0.116	0.294	-	0.116	-	-
1	D-BC	714.875	0.198	0.198	0.448	0.314	0.124	0.314	-	0.124	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	11.00	100.000
B	ONE HOUR	✓	0.00	100.000
C	ONE HOUR	✓	172.00	100.000
D	ONE HOUR	✓	154.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	0.000	11.000	0.000
	B	0.000	0.000	0.000	0.000
	C	6.000	166.000	0.000	0.000
	D	2.000	0.000	152.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.00	1.00	0.00
	B	0.25	0.25	0.25	0.25
	C	0.03	0.97	0.00	0.00
	D	0.01	0.00	0.99	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B-AD	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A-B	-	-	-	-	-	0.00	0.00	-	-	-	-	-
A-C	-	-	-	-	-	10.09	15.14	-	-	-	-	-
A-D	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D-A	0.00	4.86	0.00	−1	A	1.84	2.75	0.22	4.78	0.00	0.22	4.78
D-BC	0.24	6.63	0.31	−1	A	139.48	209.22	21.93	6.29	0.24	21.94	6.29
C-ABD	0.30	8.25	0.42	−1	A	153.72	230.58	29.70	7.73	0.33	29.70	7.73
C-D	-	-	-	-	-	0.00	0.00	-	-	-	-	-
C-A	-	-	-	-	-	4.11	6.17	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	762.52	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	588.76	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	8.28	2.07	8.28	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.87	0.000	0.00	0.00	0.000	A
D-A	1.51	0.38	1.50	0.00	760.64	0.002	0.00	0.00	4.741	A
D-BC	114.43	28.61	113.67	0.00	711.82	0.161	0.00	0.19	6.011	A
C-ABD	125.87	31.47	124.88	0.00	633.63	0.199	0.00	0.25	7.064	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.62	0.91	3.62	0.00	-	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	755.27	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	570.50	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	9.89	2.47	9.89	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.64	0.000	0.00	0.00	0.000	A
D-A	1.80	0.45	1.80	0.00	753.43	0.002	0.00	0.00	4.789	A
D-BC	136.64	34.16	136.46	0.00	711.23	0.192	0.19	0.24	6.262	A
C-ABD	150.53	37.63	150.26	0.00	628.22	0.240	0.25	0.31	7.529	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	4.09	1.02	4.09	0.00	-	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	745.49	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	545.98	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	12.11	3.03	12.11	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.33	0.000	0.00	0.00	0.000	A
D-A	2.20	0.55	2.20	0.00	743.15	0.003	0.00	0.00	4.858	A
D-BC	167.36	41.84	167.08	0.00	710.41	0.236	0.24	0.31	6.623	A
C-ABD	184.75	46.19	184.32	0.00	620.96	0.298	0.31	0.42	8.235	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	4.63	1.16	4.63	0.00	-	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	745.41	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	545.72	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	12.11	3.03	12.11	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.32	0.000	0.00	0.00	0.000	A
D-A	2.20	0.55	2.20	0.00	743.05	0.003	0.00	0.00	4.858	A
D-BC	167.36	41.84	167.35	0.00	710.40	0.236	0.31	0.31	6.628	A
C-ABD	184.75	46.19	184.74	0.00	620.89	0.298	0.42	0.42	8.253	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	4.63	1.16	4.63	0.00	-	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	755.13	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	570.06	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	9.89	2.47	9.89	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.64	0.000	0.00	0.00	0.000	A
D-A	1.80	0.45	1.80	0.00	753.28	0.002	0.00	0.00	4.792	A
D-BC	136.64	34.16	136.91	0.00	711.22	0.192	0.31	0.24	6.270	A
C-ABD	150.54	37.63	150.95	0.00	628.11	0.240	0.42	0.32	7.553	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	4.09	1.02	4.09	0.00	-	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	762.24	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	587.93	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	8.28	2.07	8.28	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.87	0.000	0.00	0.00	0.000	A
D-A	1.51	0.38	1.51	0.00	760.35	0.002	0.00	0.00	4.743	A
D-BC	114.43	28.61	114.62	0.00	711.82	0.161	0.24	0.19	6.031	A
C-ABD	125.88	31.47	126.15	0.00	633.40	0.199	0.32	0.25	7.103	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.61	0.90	3.61	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.03	0.00	4.741	A	A
D-BC	2.76	0.18	6.011	A	A
C-ABD	3.67	0.24	7.064	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:00-08:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.04	0.00	4.789	A	A
D-BC	3.47	0.23	6.262	A	A
C-ABD	4.73	0.32	7.529	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:15-08:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.04	0.00	4.858	A	A
D-BC	4.48	0.30	6.623	A	A
C-ABD	6.35	0.42	8.235	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:30-08:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.04	0.00	4.858	A	A
D-BC	4.59	0.31	6.628	A	A
C-ABD	6.40	0.43	8.253	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:45-09:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.04	0.00	4.792	A	A
D-BC	3.68	0.25	6.270	A	A
C-ABD	4.79	0.32	7.553	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (09:00-09:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.03	0.00	4.743	A	A
D-BC	2.95	0.20	6.031	A	A
C-ABD	3.76	0.25	7.103	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.19	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.25	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.24	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.31	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.31	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.42	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.31	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.42	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.24	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.32	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.19	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.25	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base, PM	2023 Base	PM		ONE HOUR	16:00	17:30	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	J7 A55	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		8.56	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	Unclassified Road		Major
B	B	A55 E/B On		Minor
C	C	A5152		Major
D	D	A55 E/B Off		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.06		0.00		2.20	224.63		
C	7.06		0.00		2.20	149.70	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.75	5.44	4.86	4.47	✓	3.00	168	234
D	One lane plus flare				10.00	10.00	5.20	4.01	3.78	✓	2.00	87	222

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	704.048	-	-	-	0.260	0.260	0.260	-	0.260	-	-
1	B-AD	679.496	0.118	0.298	-	-	-	0.188	0.426	0.188	0.118	0.298
1	B-C	798.749	0.117	0.295	-	-	-	-	-	-	0.117	0.295
1	C-B	660.657	0.244	0.244	-	-	-	-	-	-	0.244	0.244
1	D-A	794.525	-	-	-	0.294	0.116	0.294	-	0.116	-	-
1	D-BC	714.784	0.197	0.197	0.448	0.314	0.124	0.314	-	0.124	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	3.00	100.000
B	ONE HOUR	✓	0.00	100.000
C	ONE HOUR	✓	245.00	100.000
D	ONE HOUR	✓	124.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	1.000	2.000	0.000
	B	0.000	0.000	0.000	0.000
	C	6.000	239.000	0.000	0.000
	D	5.000	0.000	119.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.33	0.67	0.00
	B	0.25	0.25	0.25	0.25
	C	0.02	0.98	0.00	0.00
	D	0.04	0.00	0.96	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B-AD	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A-B	-	-	-	-	-	0.00	0.00	-	-	-	-	-
A-C	-	-	-	-	-	0.00	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D-A	0.01	4.80	0.01	−1	A	4.59	6.88	0.54	4.74	0.01	0.54	4.74
D-BC	0.18	6.19	0.22	−1	A	109.20	163.79	16.23	5.95	0.18	16.23	5.95
C-ABD	0.42	9.81	0.72	1.00	A	221.29	331.93	49.07	8.87	0.55	49.08	8.87
C-D	-	-	-	-	-	0.00	0.00	-	-	-	-	-
C-A	-	-	-	-	-	3.53	5.29	-	-	-	-	-

Main Results for each time segment

Main results: (16:00-16:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	772.30	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	575.21	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.87	0.000	0.00	0.00	0.000	A
D-A	3.76	0.94	3.74	0.00	768.11	0.005	0.00	0.00	4.709	A
D-BC	89.59	22.40	89.02	0.00	713.37	0.126	0.00	0.14	5.761	A
C-ABD	181.21	45.30	179.64	0.00	641.70	0.282	0.00	0.39	7.767	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.24	0.81	3.24	0.00	-	-	-	-	-	-

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	767.00	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	554.14	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.64	0.000	0.00	0.00	0.000	A
D-A	4.49	1.12	4.49	0.00	762.66	0.006	0.00	0.01	4.747	A
D-BC	106.98	26.74	106.85	0.00	713.09	0.150	0.14	0.18	5.936	A
C-ABD	216.70	54.17	216.22	0.00	637.90	0.340	0.39	0.51	8.528	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.55	0.89	3.55	0.00	-	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	759.86	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	525.91	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.32	0.000	0.00	0.00	0.000	A
D-A	5.51	1.38	5.50	0.00	755.11	0.007	0.01	0.01	4.802	A
D-BC	131.02	32.76	130.83	0.00	712.71	0.184	0.18	0.22	6.185	A
C-ABD	265.94	66.48	265.11	0.00	632.81	0.420	0.51	0.72	9.768	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.81	0.95	3.81	0.00	-	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	759.81	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	525.51	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.32	0.000	0.00	0.00	0.000	A
D-A	5.51	1.38	5.50	0.00	755.04	0.007	0.01	0.01	4.802	A
D-BC	131.02	32.76	131.02	0.00	712.70	0.184	0.22	0.22	6.188	A
C-ABD	265.95	66.49	265.92	0.00	632.77	0.420	0.72	0.72	9.813	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.80	0.95	3.80	0.00	-	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	766.90	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	553.48	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.64	0.000	0.00	0.00	0.000	A
D-A	4.49	1.12	4.50	0.00	762.55	0.006	0.01	0.01	4.748	A
D-BC	106.98	26.74	107.16	0.00	713.09	0.150	0.22	0.18	5.944	A
C-ABD	216.71	54.18	217.50	0.00	637.83	0.340	0.72	0.52	8.582	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.54	0.88	3.54	0.00	-	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	772.09	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	574.11	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.87	0.000	0.00	0.00	0.000	A
D-A	3.76	0.94	3.77	0.00	767.89	0.005	0.01	0.00	4.710	A
D-BC	89.59	22.40	89.72	0.00	713.36	0.126	0.18	0.14	5.775	A
C-ABD	181.22	45.31	181.72	0.00	641.53	0.282	0.52	0.40	7.839	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.23	0.81	3.23	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (16:00-16:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.07	0.00	4.709	A	A
D-BC	2.08	0.14	5.761	A	A
C-ABD	5.79	0.39	7.767	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:15-16:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.09	0.01	4.747	A	A
D-BC	2.58	0.17	5.936	A	A
C-ABD	7.70	0.51	8.528	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:30-16:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.11	0.01	4.802	A	A
D-BC	3.28	0.22	6.185	A	A
C-ABD	10.82	0.72	9.768	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:45-17:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.11	0.01	4.802	A	A
D-BC	3.36	0.22	6.188	A	A
C-ABD	10.93	0.73	9.813	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:00-17:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.09	0.01	4.748	A	A
D-BC	2.72	0.18	5.944	A	A
C-ABD	7.85	0.52	8.582	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:15-17:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.08	0.01	4.710	A	A
D-BC	2.21	0.15	5.775	A	A
C-ABD	5.98	0.40	7.839	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:00-16:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1			N/A	N/A
D-A	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.39	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:15-16:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1			N/A	N/A
D-A	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.18	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.51	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1			N/A	N/A
D-A	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.22	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.72	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1			N/A	N/A
D-A	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.22	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.72	0.00	0.00	0.00	1.00			N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1			N/A	N/A
D-A	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.18	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.52	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1			N/A	N/A
D-A	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.40	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base + Dev, AM	2023 Base + Dev	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	J7 A55	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		9.51	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	Unclassified Road		Major
B	B	A55 E/B On		Minor
C	C	A5152		Major
D	D	A55 E/B Off		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.06		0.00		2.20	224.63		
C	7.06		0.00		2.20	149.70	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.75	5.44	4.86	4.47	✓	3.00	168	234
D	One lane plus flare				10.00	10.00	5.20	4.01	3.78	✓	2.00	87	222

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	704.048	-	-	-	0.260	0.260	0.260	-	0.260	-	-
1	B-AD	679.496	0.118	0.298	-	-	-	0.188	0.426	0.188	0.118	0.298
1	B-C	798.749	0.117	0.295	-	-	-	-	-	-	0.117	0.295
1	C-B	660.657	0.244	0.244	-	-	-	-	-	-	0.244	0.244
1	D-A	794.337	-	-	-	0.294	0.116	0.294	-	0.116	-	-
1	D-BC	714.875	0.198	0.198	0.448	0.314	0.124	0.314	-	0.124	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	12.00	100.000
B	ONE HOUR	✓	0.00	100.000
C	ONE HOUR	✓	274.00	100.000
D	ONE HOUR	✓	154.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	1.000	11.000	0.000
	B	0.000	0.000	0.000	0.000
	C	6.000	268.000	0.000	0.000
	D	2.000	0.000	152.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.08	0.92	0.00
	B	0.25	0.25	0.25	0.25
	C	0.02	0.98	0.00	0.00
	D	0.01	0.00	0.99	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B-AD	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A-B	-	-	-	-	-	0.92	1.38	-	-	-	-	-
A-C	-	-	-	-	-	10.09	15.14	-	-	-	-	-
A-D	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D-A	0.00	4.86	0.00	−1	A	1.84	2.75	0.22	4.78	0.00	0.22	4.78
D-BC	0.24	6.63	0.31	−1	A	139.48	209.22	21.94	6.29	0.24	21.94	6.29
C-ABD	0.48	11.16	0.92	1.00	B	248.18	372.27	60.90	9.82	0.68	60.92	9.82
C-D	-	-	-	-	-	0.00	0.00	-	-	-	-	-
C-A	-	-	-	-	-	3.25	4.87	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	762.44	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	555.93	0.000	0.00	0.00	0.000	A
A-B	0.75	0.19	0.75	0.00	-	-	-	-	-	-
A-C	8.28	2.07	8.28	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.87	0.000	0.00	0.00	0.000	A
D-A	1.51	0.38	1.50	0.00	760.63	0.002	0.00	0.00	4.741	A
D-BC	114.43	28.61	113.67	0.00	711.67	0.161	0.00	0.19	6.012	A
C-ABD	203.21	50.80	201.34	0.00	633.45	0.321	0.00	0.47	8.296	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.07	0.77	3.07	0.00	-	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	755.16	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	530.93	0.000	0.00	0.00	0.000	A
A-B	0.90	0.22	0.90	0.00	-	-	-	-	-	-
A-C	9.89	2.47	9.89	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.64	0.000	0.00	0.00	0.000	A
D-A	1.80	0.45	1.80	0.00	753.41	0.002	0.00	0.00	4.789	A
D-BC	136.64	34.16	136.46	0.00	711.05	0.192	0.19	0.24	6.264	A
C-ABD	243.03	60.76	242.40	0.00	628.00	0.387	0.47	0.62	9.321	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.29	0.82	3.29	0.00	-	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	745.36	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	497.45	0.000	0.00	0.00	0.000	A
A-B	1.10	0.28	1.10	0.00	-	-	-	-	-	-
A-C	12.11	3.03	12.11	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.32	0.000	0.00	0.00	0.000	A
D-A	2.20	0.55	2.20	0.00	743.13	0.003	0.00	0.00	4.858	A
D-BC	167.36	41.84	167.08	0.00	710.18	0.236	0.24	0.31	6.625	A
C-ABD	298.27	74.57	297.13	0.00	620.70	0.481	0.62	0.91	11.086	B
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.41	0.85	3.41	0.00	-	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	745.28	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	496.89	0.000	0.00	0.00	0.000	A
A-B	1.10	0.28	1.10	0.00	-	-	-	-	-	-
A-C	12.11	3.03	12.11	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.32	0.000	0.00	0.00	0.000	A
D-A	2.20	0.55	2.20	0.00	743.03	0.003	0.00	0.00	4.859	A
D-BC	167.36	41.84	167.35	0.00	710.18	0.236	0.31	0.31	6.631	A
C-ABD	298.28	74.57	298.24	0.00	620.64	0.481	0.91	0.92	11.164	B
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.40	0.85	3.40	0.00	-	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	755.02	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	530.03	0.000	0.00	0.00	0.000	A
A-B	0.90	0.22	0.90	0.00	-	-	-	-	-	-
A-C	9.89	2.47	9.89	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.63	0.000	0.00	0.00	0.000	A
D-A	1.80	0.45	1.80	0.00	753.26	0.002	0.00	0.00	4.790	A
D-BC	136.64	34.16	136.91	0.00	711.04	0.192	0.31	0.24	6.275	A
C-ABD	243.04	60.76	244.14	0.00	627.91	0.387	0.92	0.65	9.409	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.28	0.82	3.28	0.00	-	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	762.15	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	554.55	0.000	0.00	0.00	0.000	A
A-B	0.75	0.19	0.75	0.00	-	-	-	-	-	-
A-C	8.28	2.07	8.28	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.87	0.000	0.00	0.00	0.000	A
D-A	1.51	0.38	1.51	0.00	760.34	0.002	0.00	0.00	4.743	A
D-BC	114.43	28.61	114.62	0.00	711.67	0.161	0.24	0.19	6.030	A
C-ABD	203.23	50.81	203.89	0.00	633.23	0.321	0.65	0.48	8.398	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	3.05	0.76	3.05	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.03	0.00	4.741	A	A
D-BC	2.76	0.18	6.012	A	A
C-ABD	6.93	0.46	8.296	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:00-08:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.04	0.00	4.789	A	A
D-BC	3.47	0.23	6.264	A	A
C-ABD	9.43	0.63	9.321	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:15-08:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.04	0.00	4.858	A	A
D-BC	4.48	0.30	6.625	A	A
C-ABD	13.75	0.92	11.086	B	B
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:30-08:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.04	0.00	4.859	A	A
D-BC	4.59	0.31	6.631	A	A
C-ABD	13.94	0.93	11.164	B	B
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:45-09:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.04	0.00	4.790	A	A
D-BC	3.68	0.25	6.275	A	A
C-ABD	9.66	0.64	9.409	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (09:00-09:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.03	0.00	4.743	A	A
D-BC	2.95	0.20	6.030	A	A
C-ABD	7.19	0.48	8.398	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.19	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.47	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.24	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.62	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.31	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.91	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.31	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.92	0.00	0.00	0.00	1.00			N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.24	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.65	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.19	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.48	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base + Dev, PM	2023 Base + Dev	PM		ONE HOUR	16:00	17:30	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	J7 A55	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		12.00	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	Unclassified Road		Major
B	B	A55 E/B On		Minor
C	C	A5152		Major
D	D	A55 E/B Off		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.06		0.00		2.20	224.63		
C	7.06		0.00		2.20	149.70	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.75	5.44	4.86	4.47	✓	3.00	168	234
D	One lane plus flare				10.00	10.00	5.20	4.01	3.78	✓	2.00	87	222

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	704.048	-	-	-	0.260	0.260	0.260	-	0.260	-	-
1	B-AD	679.496	0.118	0.298	-	-	-	0.188	0.426	0.188	0.118	0.298
1	B-C	798.749	0.117	0.295	-	-	-	-	-	-	0.117	0.295
1	C-B	660.657	0.244	0.244	-	-	-	-	-	-	0.244	0.244
1	D-A	794.525	-	-	-	0.294	0.116	0.294	-	0.116	-	-
1	D-BC	714.784	0.197	0.197	0.448	0.314	0.124	0.314	-	0.124	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	3.00	100.000
B	ONE HOUR	✓	0.00	100.000
C	ONE HOUR	✓	343.00	100.000
D	ONE HOUR	✓	124.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	1.000	2.000	0.000
	B	0.000	0.000	0.000	0.000
	C	3.000	340.000	0.000	0.000
	D	5.000	0.000	119.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.33	0.67	0.00
	B	0.25	0.25	0.25	0.25
	C	0.01	0.99	0.00	0.00
	D	0.04	0.00	0.96	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B-AD	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A-B	-	-	-	-	-	0.00	0.00	-	-	-	-	-
A-C	-	-	-	-	-	0.00	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D-A	0.01	4.80	0.01	−1	A	4.59	6.88	0.54	4.73	0.01	0.54	4.73
D-BC	0.18	6.18	0.22	−1	A	109.20	163.79	16.21	5.94	0.18	16.21	5.94
C-ABD	0.60	14.14	1.46	2.00	B	313.40	470.10	92.01	11.74	1.02	92.03	11.75
C-D	-	-	-	-	-	0.00	0.00	-	-	-	-	-
C-A	-	-	-	-	-	1.34	2.02	-	-	-	-	-

Main Results for each time segment

Main results: (16:00-16:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	772.30	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	543.23	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	703.46	0.000	0.00	0.00	0.000	A
D-A	3.76	0.94	3.74	0.00	768.78	0.005	0.00	0.00	4.705	A
D-BC	89.59	22.40	89.02	0.00	714.07	0.125	0.00	0.14	5.755	A
C-ABD	256.88	64.22	254.24	0.00	640.24	0.401	0.00	0.66	9.265	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	1.35	0.34	1.35	0.00	-	-	-	-	-	-

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	767.00	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	515.48	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	703.34	0.000	0.00	0.00	0.000	A
D-A	4.49	1.12	4.49	0.00	763.46	0.006	0.00	0.01	4.742	A
D-BC	106.98	26.74	106.85	0.00	713.94	0.150	0.14	0.17	5.928	A
C-ABD	306.96	76.74	305.95	0.00	636.15	0.483	0.66	0.91	10.867	B
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	1.39	0.35	1.39	0.00	-	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	759.86	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	478.44	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	703.18	0.000	0.00	0.00	0.000	A
D-A	5.51	1.38	5.50	0.00	756.09	0.007	0.01	0.01	4.795	A
D-BC	131.02	32.76	130.83	0.00	713.74	0.184	0.17	0.22	6.174	A
C-ABD	376.34	94.08	374.27	0.00	630.65	0.597	0.91	1.43	13.925	B
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	1.31	0.33	1.31	0.00	-	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	759.81	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	477.51	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	703.18	0.000	0.00	0.00	0.000	A
D-A	5.51	1.38	5.50	0.00	756.03	0.007	0.01	0.01	4.796	A
D-BC	131.02	32.76	131.02	0.00	713.74	0.184	0.22	0.22	6.177	A
C-ABD	376.35	94.09	376.25	0.00	630.62	0.597	1.43	1.46	14.137	B
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	1.30	0.33	1.30	0.00	-	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	766.90	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	514.03	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	703.34	0.000	0.00	0.00	0.000	A
D-A	4.49	1.12	4.50	0.00	763.35	0.006	0.01	0.01	4.745	A
D-BC	106.98	26.74	107.16	0.00	713.93	0.150	0.22	0.18	5.934	A
C-ABD	306.98	76.74	308.98	0.00	636.08	0.483	1.46	0.96	11.074	B
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	1.37	0.34	1.37	0.00	-	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	772.09	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	541.39	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	703.46	0.000	0.00	0.00	0.000	A
D-A	3.76	0.94	3.77	0.00	768.56	0.005	0.01	0.00	4.706	A
D-BC	89.59	22.40	89.72	0.00	714.07	0.125	0.18	0.14	5.766	A
C-ABD	256.89	64.22	257.98	0.00	640.08	0.401	0.96	0.68	9.450	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	1.34	0.33	1.34	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (16:00-16:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.07	0.00	4.705	A	A
D-BC	2.08	0.14	5.755	A	A
C-ABD	9.73	0.65	9.265	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:15-16:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.09	0.01	4.742	A	A
D-BC	2.58	0.17	5.928	A	A
C-ABD	13.83	0.92	10.867	B	B
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:30-16:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.11	0.01	4.795	A	A
D-BC	3.28	0.22	6.174	A	A
C-ABD	21.64	1.44	13.925	B	B
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:45-17:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.11	0.01	4.796	A	A
D-BC	3.35	0.22	6.177	A	A
C-ABD	22.20	1.48	14.137	B	B
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:00-17:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.09	0.01	4.745	A	A
D-BC	2.72	0.18	5.934	A	A
C-ABD	14.38	0.96	11.074	B	B
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:15-17:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.08	0.01	4.706	A	A
D-BC	2.21	0.15	5.766	A	A
C-ABD	10.22	0.68	9.450	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:00-16:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1			N/A	N/A
D-A	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.66	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:15-16:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1			N/A	N/A
D-A	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.17	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.91	0.00	0.00	1.00	1.00			N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1			N/A	N/A
D-A	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.22	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	1.43	0.00	0.00	0.00	2.00			N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1			N/A	N/A
D-A	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.22	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	1.46	0.00	0.00	0.00	2.00			N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1			N/A	N/A
D-A	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.18	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.96	0.00	0.00	1.00	2.00			N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1			N/A	N/A
D-A	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.68	0.00	0.00	1.00	1.00			N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev + seasonality, PM Aug

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Rel
2023 Base + Dev + seasonality, PM Aug	2023 Base + Dev + seasonality	PM Aug		ONE HOUR	16:00	17:30	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	J7 A55	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		18.72	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	Unclassified Road		Major
B	B	A55 E/B On		Minor
C	C	A5152		Major
D	D	A55 E/B Off		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.06		0.00		2.20	224.63		
C	7.06		0.00		2.20	149.70	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.75	5.44	4.86	4.47	✓	3.00	168	234
D	One lane plus flare				10.00	10.00	5.20	4.01	3.78	✓	2.00	87	222

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	704.048	-	-	-	0.260	0.260	0.260	-	0.260	-	-
1	B-AD	679.496	0.118	0.298	-	-	-	0.188	0.426	0.188	0.118	0.298
1	B-C	798.749	0.117	0.295	-	-	-	-	-	-	0.117	0.295
1	C-B	660.657	0.244	0.244	-	-	-	-	-	-	0.244	0.244
1	D-A	794.770	-	-	-	0.294	0.116	0.294	-	0.116	-	-
1	D-BC	714.665	0.197	0.197	0.448	0.314	0.124	0.314	-	0.124	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	4.00	100.000
B	ONE HOUR	✓	0.00	100.000
C	ONE HOUR	✓	430.00	100.000
D	ONE HOUR	✓	166.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	1.000	3.000	0.000
	B	0.000	0.000	0.000	0.000
	C	8.000	422.000	0.000	0.000
	D	7.000	0.000	159.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.25	0.75	0.00
	B	0.25	0.25	0.25	0.25
	C	0.02	0.98	0.00	0.00
	D	0.04	0.00	0.96	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B-AD	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A-B	-	-	-	-	-	0.00	0.00	-	-	-	-	-
A-C	-	-	-	-	-	0.00	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D-A	0.01	4.91	0.01	−1	A	6.42	9.64	0.77	4.83	0.01	0.77	4.83
D-BC	0.25	6.71	0.32	−1	A	145.90	218.85	23.16	6.35	0.26	23.16	6.35
C-ABD	0.76	23.42	2.97	10.00	C	392.00	588.00	167.28	17.07	1.86	167.33	17.07
C-D	-	-	-	-	-	0.00	0.00	-	-	-	-	-
C-A	-	-	-	-	-	2.57	3.86	-	-	-	-	-

Main Results for each time segment

Main results: (16:00-16:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	763.41	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	507.22	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.48	0.000	0.00	0.00	0.000	A
D-A	5.27	1.32	5.24	0.00	759.13	0.007	0.00	0.01	4.775	A
D-BC	119.70	29.93	118.90	0.00	712.77	0.168	0.00	0.20	6.055	A
C-ABD	320.74	80.19	316.74	0.00	635.34	0.505	0.00	1.00	11.167	B
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	2.99	0.75	2.99	0.00	-	-	-	-	-	-

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	756.32	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	471.84	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.17	0.000	0.00	0.00	0.000	A
D-A	6.29	1.57	6.29	0.00	751.46	0.008	0.01	0.01	4.830	A
D-BC	142.94	35.73	142.74	0.00	712.40	0.201	0.20	0.25	6.318	A
C-ABD	383.79	95.95	381.75	0.00	630.28	0.609	1.00	1.51	14.364	B
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	2.77	0.69	2.77	0.00	-	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	746.78	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	424.69	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	701.74	0.000	0.00	0.00	0.000	A
D-A	7.71	1.93	7.70	0.00	740.51	0.010	0.01	0.01	4.912	A
D-BC	175.06	43.77	174.77	0.00	711.88	0.246	0.25	0.32	6.700	A
C-ABD	471.36	117.84	466.01	0.00	623.50	0.756	1.51	2.85	22.123	C
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	2.08	0.52	2.08	0.00	-	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	746.69	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	422.34	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	701.71	0.000	0.00	0.00	0.000	A
D-A	7.71	1.93	7.71	0.00	740.38	0.010	0.01	0.01	4.913	A
D-BC	175.06	43.77	175.06	0.00	711.85	0.246	0.32	0.32	6.705	A
C-ABD	471.44	117.86	470.95	0.00	623.49	0.756	2.85	2.97	23.419	C
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	2.00	0.50	2.00	0.00	-	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	756.17	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	468.37	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.13	0.000	0.00	0.00	0.000	A
D-A	6.29	1.57	6.30	0.00	751.26	0.008	0.01	0.01	4.832	A
D-BC	142.94	35.73	143.22	0.00	712.36	0.201	0.32	0.25	6.330	A
C-ABD	383.88	95.97	389.24	0.00	630.24	0.609	2.97	1.63	15.254	C
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	2.68	0.67	2.68	0.00	-	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	0.00	763.11	0.000	0.00	0.00	0.000	A
B-AD	0.00	0.00	0.00	0.00	504.16	0.000	0.00	0.00	0.000	A
A-B	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-C	0.00	0.00	0.00	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	702.46	0.000	0.00	0.00	0.000	A
D-A	5.27	1.32	5.28	0.00	758.79	0.007	0.01	0.01	4.779	A
D-BC	119.70	29.93	119.90	0.00	712.76	0.168	0.25	0.20	6.076	A
C-ABD	320.80	80.20	323.11	0.00	635.14	0.505	1.63	1.05	11.625	B
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	2.92	0.73	2.92	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (16:00-16:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.10	0.01	4.775	A	A
D-BC	2.91	0.19	6.055	A	A
C-ABD	14.63	0.98	11.167	B	B
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:15-16:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.12	0.01	4.830	A	A
D-BC	3.66	0.24	6.318	A	A
C-ABD	22.84	1.52	14.364	B	B
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:30-16:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.15	0.01	4.912	A	A
D-BC	4.74	0.32	6.700	A	A
C-ABD	42.70	2.85	22.123	C	C
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:45-17:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.16	0.01	4.913	A	A
D-BC	4.86	0.32	6.705	A	A
C-ABD	46.08	3.07	23.419	C	C
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:00-17:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.13	0.01	4.832	A	A
D-BC	3.88	0.26	6.330	A	A
C-ABD	25.19	1.68	15.254	C	B
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:15-17:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.00	0.00	0.000	A	A
B-AD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.11	0.01	4.779	A	A
D-BC	3.11	0.21	6.076	A	A
C-ABD	15.84	1.06	11.625	B	B
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:00-16:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1			N/A	N/A
D-A	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.20	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	1.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:15-16:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1			N/A	N/A
D-A	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.25	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	1.51	0.00	0.00	2.00	3.00			N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1			N/A	N/A
D-A	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.32	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	2.85	0.00	0.00	3.00	10.00			N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1			N/A	N/A
D-A	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.32	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	2.97	0.00	0.00	1.00	7.00			N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	~1	~1	~1	~1			N/A	N/A
B-AD	0.00	~1	~1	~1	~1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	~1	~1	~1	~1			N/A	N/A
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.25	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	1.63	0.00	0.00	3.00	5.00			N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.00	~1	~1	~1	~1			N/A	N/A
B-AD	0.00	~1	~1	~1	~1			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	~1	~1	~1	~1			N/A	N/A
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.20	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	1.05	0.00	0.00	1.00	3.00			N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: J7_A55_WEST_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A55 J7\WEST
Report generation date: 14/06/2018 11:51:16

- » (Default Analysis Set) - 2017 Base, AM
- » (Default Analysis Set) - 2017 Base, PM
- » (Default Analysis Set) - 2023 Base, AM
- » (Default Analysis Set) - 2023 Base, PM
- » (Default Analysis Set) - 2023 Base + Dev, AM
- » (Default Analysis Set) - 2023 Base + Dev, PM
- » (Default Analysis Set) - 2023 Base + Dev + Seasonality, AM Aug
- » (Default Analysis Set) - 2023 Base + Dev + Seasonality, PM Aug

Summary of junction performance

	AM				AM Aug				PM				PM Aug			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	L
A1 - 2017 Base																
Stream B-C	0.31	5.53	0.24	A					0.37	5.69	0.27	A				
Stream B-AD	0.01	7.30	0.01	A					0.01	7.37	0.01	A				
Stream A-B	-	-	-	-					-	-	-	-				
Stream A-C	-	-	-	-					-	-	-	-				
Stream A-D	0.01	5.71	0.01	A					0.00	0.00	0.00	A				
Stream D-A	0.00	0.00	0.00	A					0.00	0.00	0.00	A				
Stream D-BC	0.00	0.00	0.00	A					0.00	0.00	0.00	A				
Stream C-ABD	0.00	0.00	0.00	A					0.00	0.00	0.00	A				
Stream C-D	-	-	-	-					-	-	-	-				
Stream C-A	-	-	-	-					-	-	-	-				
A1 - 2023 Base																
Stream B-C	0.34	5.66	0.25	A					0.40	5.83	0.29	A				
Stream B-AD	0.01	7.38	0.01	A					0.01	7.45	0.01	A				
Stream A-B	-	-	-	-					-	-	-	-				
Stream A-C	-	-	-	-					-	-	-	-				
Stream A-D	0.01	5.75	0.01	A					0.00	0.00	0.00	A				
Stream D-A	0.00	0.00	0.00	A					0.00	0.00	0.00	A				
Stream D-BC	0.00	0.00	0.00	A					0.00	0.00	0.00	A				
Stream C-ABD	0.00	0.00	0.00	A					0.00	0.00	0.00	A				
Stream C-D	-	-	-	-					-	-	-	-				
Stream C-A	-	-	-	-					-	-	-	-				
A1 - 2023 Base + Dev																
Stream B-C	0.62	6.85	0.38	A					0.71	7.10	0.42	A				
Stream B-AD	0.01	7.73	0.01	A					0.01	7.83	0.01	A				

Stream A-B	-	-	-	-					-	-	-	-				
Stream A-C	-	-	-	-					-	-	-	-				
Stream A-D	0.01	6.03	0.01	A					0.00	0.00	0.00	A				
Stream D-A	0.00	0.00	0.00	A					0.00	0.00	0.00	A				
Stream D-BC	0.00	0.00	0.00	A					0.00	0.00	0.00	A				
Stream C-ABD	0.00	0.00	0.00	A					0.00	0.00	0.00	A				
Stream C-D	-	-	-	-					-	-	-	-				
Stream C-A	-	-	-	-					-	-	-	-				
A1 - 2023 Base + Dev + Seasonality																
Stream B-C					0.93	8.40	0.48	A					1.09	8.89	0.52	
Stream B-AD					0.01	8.47	0.01	A					0.01	8.68	0.01	
Stream A-B					-	-	-	-					-	-	-	
Stream A-C					-	-	-	-					-	-	-	
Stream A-D					0.01	6.31	0.01	A					0.00	0.00	0.00	
Stream D-A					0.00	0.00	0.00	A					0.00	0.00	0.00	
Stream D-BC					0.00	0.00	0.00	A					0.00	0.00	0.00	
Stream C-ABD					0.00	0.00	0.00	A					0.00	0.00	0.00	
Stream C-D					-	-	-	-					-	-	-	
Stream C-A					-	-	-	-					-	-	-	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 07:45 - 09:15
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 07:45 - 09:15
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 07:45 - 09:15
"D7 - 2023 Base + Dev + Seasonality, AM Aug" model duration: 07:45 - 09:15
"D8 - 2023 Base + Dev + Seasonality, PM Aug" model duration: 07:45 - 09:15

Run using Junctions 8.0.6.541 at 14/06/2018 11:51:05

File summary

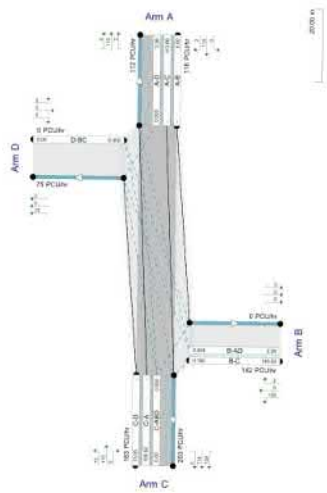
Title	(untitled)
Location	
Site Number	
Date	07/04/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	Rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, AM	2017 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	J7 A55	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	5.56	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	O3/O2 D3/D2 J7 East Junction		Major
B	B	O4 W Bound Off Slip		Minor
C	C	O1/D1 A5152		Major
D	D	D4 W Bound On		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.06		0.00		2.20	224.63		
C	7.06		0.00		2.20	149.70	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.75	5.44	4.86	4.47	✓	3.00	168	234
D	One lane plus flare				10.00	10.00	5.20	4.01	2.20	✓	2.00	0	0

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	704.048	-	-	-	0.260	0.260	0.260	-	0.260	-	-
1	B-AD	581.916	0.101	0.256	-	-	-	0.161	0.365	0.161	0.101	0.256
1	B-C	913.455	0.134	0.338	-	-	-	-	-	-	0.134	0.338
1	C-B	660.657	0.244	0.244	-	-	-	-	-	-	0.244	0.244
1	D-A	698.922	-	-	-	0.258	0.102	0.258	-	0.102	-	-
1	D-BC	535.280	0.148	0.148	0.336	0.235	0.093	0.235	-	0.093	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	154.00	100.000
B	ONE HOUR	✓	189.00	100.000
C	ONE HOUR	✓	243.00	100.000
D	ONE HOUR	✓	0.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	115.94	115.94		
07:45-08:00	B	142.29	142.29		
07:45-08:00	C	182.94	182.94		
07:45-08:00	D	0.00	0.00		
08:00-08:15	A	138.44	138.44		
08:00-08:15	B	169.91	169.91		
08:00-08:15	C	218.45	218.45		
08:00-08:15	D	0.00	0.00		
08:15-08:30	A	169.56	169.56		
08:15-08:30	B	208.09	208.09		
08:15-08:30	C	267.55	267.55		
08:15-08:30	D	0.00	0.00		
08:30-08:45	A	169.56	169.56		
08:30-08:45	B	208.09	208.09		
08:30-08:45	C	267.55	267.55		
08:30-08:45	D	0.00	0.00		
08:45-09:00	A	138.44	138.44		
08:45-09:00	B	169.91	169.91		
08:45-09:00	C	218.45	218.45		
08:45-09:00	D	0.00	0.00		
09:00-09:15	A	115.94	115.94		
09:00-09:15	B	142.29	142.29		
09:00-09:15	C	182.94	182.94		
09:00-09:15	D	0.00	0.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	0.000	151.000	3.000
	B	3.000	0.000	186.000	0.000
	C	146.000	0.000	0.000	97.000
	D	0.000	0.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.00	0.98	0.02
	B	0.02	0.00	0.98	0.00
	C	0.60	0.00	0.00	0.40
	D	0.25	0.25	0.25	0.25

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.24	5.53	0.31	A
B-AD	0.01	7.30	0.01	A
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.01	5.71	0.01	A
D-A	0.00	0.00	0.00	A
D-BC	0.00	0.00	0.00	A
C-ABD	0.00	0.00	0.00	A
C-D	-	-	-	-
C-A	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	140.03	139.27	0.00	874.13	0.160	0.19	4.893	A
B-AD	2.26	2.24	0.00	523.40	0.004	0.00	6.907	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	113.68	113.68	0.00	-	-	-	-	-
A-D	2.26	2.24	0.00	655.86	0.003	0.00	5.507	A
D-A	0.00	0.00	0.00	662.48	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	484.55	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	632.90	0.000	0.00	0.000	A
C-D	73.03	73.03	0.00	-	-	-	-	-
C-A	109.92	109.92	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	167.21	167.02	0.00	866.47	0.193	0.24	5.145	A
B-AD	2.70	2.69	0.00	511.97	0.005	0.01	7.067	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	135.75	135.75	0.00	-	-	-	-	-
A-D	2.70	2.69	0.00	646.50	0.004	0.00	5.591	A
D-A	0.00	0.00	0.00	655.41	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	474.70	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	627.51	0.000	0.00	0.000	A
C-D	87.20	87.20	0.00	-	-	-	-	-
C-A	131.25	131.25	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	204.79	204.49	0.00	855.89	0.239	0.31	5.524	A
B-AD	3.30	3.30	0.00	496.03	0.007	0.01	7.305	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	166.25	166.25	0.00	-	-	-	-	-
A-D	3.30	3.30	0.00	633.57	0.005	0.01	5.711	A
D-A	0.00	0.00	0.00	645.63	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	461.08	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	620.06	0.000	0.00	0.000	A
C-D	106.80	106.80	0.00	-	-	-	-	-
C-A	160.75	160.75	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	204.79	204.78	0.00	855.89	0.239	0.31	5.528	A
B-AD	3.30	3.30	0.00	496.03	0.007	0.01	7.305	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	166.25	166.25	0.00	-	-	-	-	-
A-D	3.30	3.30	0.00	633.56	0.005	0.01	5.711	A
D-A	0.00	0.00	0.00	645.62	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	461.08	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	620.06	0.000	0.00	0.000	A
C-D	106.80	106.80	0.00	-	-	-	-	-
C-A	160.75	160.75	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	167.21	167.50	0.00	866.47	0.193	0.24	5.154	A
B-AD	2.70	2.70	0.00	511.97	0.005	0.01	7.068	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	135.75	135.75	0.00	-	-	-	-	-
A-D	2.70	2.70	0.00	646.50	0.004	0.00	5.591	A
D-A	0.00	0.00	0.00	655.40	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	474.69	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	627.51	0.000	0.00	0.000	A
C-D	87.20	87.20	0.00	-	-	-	-	-
C-A	131.25	131.25	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	140.03	140.23	0.00	874.12	0.160	0.19	4.908	A
B-AD	2.26	2.26	0.00	523.40	0.004	0.00	6.907	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	113.68	113.68	0.00	-	-	-	-	-
A-D	2.26	2.26	0.00	655.85	0.003	0.00	5.507	A
D-A	0.00	0.00	0.00	662.48	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	484.54	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	632.90	0.000	0.00	0.000	A
C-D	73.03	73.03	0.00	-	-	-	-	-
C-A	109.92	109.92	0.00	-	-	-	-	-

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, PM	2017 Base	PM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	J7 A55	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	5.72	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	O3/O2 D3/D2 J7 East Junction		Major
B	B	O4 W Bound Off Slip		Minor
C	C	O1/D1 A5152		Major
D	D	D4 W Bound On		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.06		0.00		2.20	224.63		
C	7.06		0.00		2.20	149.70	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.75	5.44	4.86	4.47	✓	3.00	168	234
D	One lane plus flare				10.00	10.00	5.20	4.01	2.20	✓	2.00	0	0

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	704.048	-	-	-	0.260	0.260	0.260	-	0.260	-	-
1	B-AD	581.649	0.101	0.255	-	-	-	0.161	0.365	0.161	0.101	0.255
1	B-C	913.768	0.134	0.338	-	-	-	-	-	-	0.134	0.338
1	C-B	660.657	0.244	0.244	-	-	-	-	-	-	0.244	0.244
1	D-A	698.922	-	-	-	0.258	0.102	0.258	-	0.102	-	-
1	D-BC	535.280	0.148	0.148	0.336	0.235	0.093	0.235	-	0.093	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	114.00	100.000
B	ONE HOUR	✓	219.00	100.000
C	ONE HOUR	✓	322.00	100.000
D	ONE HOUR	✓	0.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	85.83	85.83		
07:45-08:00	B	164.87	164.87		
07:45-08:00	C	242.42	242.42		
07:45-08:00	D	0.00	0.00		
08:00-08:15	A	102.48	102.48		
08:00-08:15	B	196.88	196.88		
08:00-08:15	C	289.47	289.47		
08:00-08:15	D	0.00	0.00		
08:15-08:30	A	125.52	125.52		
08:15-08:30	B	241.12	241.12		
08:15-08:30	C	354.53	354.53		
08:15-08:30	D	0.00	0.00		
08:30-08:45	A	125.52	125.52		
08:30-08:45	B	241.12	241.12		
08:30-08:45	C	354.53	354.53		
08:30-08:45	D	0.00	0.00		
08:45-09:00	A	102.48	102.48		
08:45-09:00	B	196.88	196.88		
08:45-09:00	C	289.47	289.47		
08:45-09:00	D	0.00	0.00		
09:00-09:15	A	85.83	85.83		
09:00-09:15	B	164.87	164.87		
09:00-09:15	C	242.42	242.42		
09:00-09:15	D	0.00	0.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	0.000	114.000	0.000
	B	3.000	0.000	216.000	0.000
	C	230.000	0.000	0.000	92.000
	D	0.000	0.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.00	1.00	0.00
	B	0.01	0.00	0.99	0.00
	C	0.71	0.00	0.00	0.29
	D	0.25	0.25	0.25	0.25

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.27	5.69	0.37	A
B-AD	0.01	7.37	0.01	A
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.00	0.00	0.00	A
D-A	0.00	0.00	0.00	A
D-BC	0.00	0.00	0.00	A
C-ABD	0.00	0.00	0.00	A
C-D	-	-	-	-
C-A	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	162.62	161.72	0.00	883.82	0.184	0.22	4.979	A
B-AD	2.26	2.24	0.00	520.67	0.004	0.00	6.943	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	85.83	85.83	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	640.38	0.000	0.00	0.000	A
D-A	0.00	0.00	0.00	646.53	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	474.91	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	639.70	0.000	0.00	0.000	A
C-D	69.26	69.26	0.00	-	-	-	-	-
C-A	173.16	173.16	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	194.18	193.95	0.00	877.98	0.221	0.28	5.262	A
B-AD	2.70	2.69	0.00	508.69	0.005	0.01	7.113	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	102.48	102.48	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	628.02	0.000	0.00	0.000	A
D-A	0.00	0.00	0.00	636.36	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	463.19	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	635.63	0.000	0.00	0.000	A
C-D	82.71	82.71	0.00	-	-	-	-	-
C-A	206.77	206.77	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	237.82	237.46	0.00	869.91	0.273	0.37	5.688	A
B-AD	3.30	3.30	0.00	491.87	0.007	0.01	7.367	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	125.52	125.52	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	610.93	0.000	0.00	0.000	A
D-A	0.00	0.00	0.00	622.30	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	446.99	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	630.01	0.000	0.00	0.000	A
C-D	101.29	101.29	0.00	-	-	-	-	-
C-A	253.23	253.23	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	237.82	237.81	0.00	869.90	0.273	0.37	5.694	A
B-AD	3.30	3.30	0.00	491.86	0.007	0.01	7.367	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	125.52	125.52	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	610.93	0.000	0.00	0.000	A
D-A	0.00	0.00	0.00	622.30	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	446.99	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	630.01	0.000	0.00	0.000	A
C-D	101.29	101.29	0.00	-	-	-	-	-
C-A	253.23	253.23	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	194.18	194.53	0.00	877.98	0.221	0.29	5.269	A
B-AD	2.70	2.70	0.00	508.69	0.005	0.01	7.114	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	102.48	102.48	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	628.02	0.000	0.00	0.000	A
D-A	0.00	0.00	0.00	636.36	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	463.19	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	635.63	0.000	0.00	0.000	A
C-D	82.71	82.71	0.00	-	-	-	-	-
C-A	206.77	206.77	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	162.62	162.85	0.00	883.81	0.184	0.23	4.996	A
B-AD	2.26	2.26	0.00	520.66	0.004	0.00	6.943	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	85.83	85.83	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	640.38	0.000	0.00	0.000	A
D-A	0.00	0.00	0.00	646.53	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	474.91	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	639.70	0.000	0.00	0.000	A
C-D	69.26	69.26	0.00	-	-	-	-	-
C-A	173.16	173.16	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, AM	2023 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	J7 A55	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	5.69	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	O3/O2 D3/D2 J7 East Junction		Major
B	B	O4 W Bound Off Slip		Minor
C	C	O1/D1 A5152		Major
D	D	D4 W Bound On		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.06		0.00		2.20	224.63		
C	7.06		0.00		2.20	149.70	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.75	5.44	4.86	4.47	✓	3.00	168	234
D	One lane plus flare				10.00	10.00	5.20	4.01	2.20	✓	2.00	0	0

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	704.048	-	-	-	0.260	0.260	0.260	-	0.260	-	-
1	B-AD	581.809	0.101	0.256	-	-	-	0.161	0.365	0.161	0.101	0.256
1	B-C	913.581	0.134	0.338	-	-	-	-	-	-	0.134	0.338
1	C-B	660.657	0.244	0.244	-	-	-	-	-	-	0.244	0.244
1	D-A	698.922	-	-	-	0.258	0.102	0.258	-	0.102	-	-
1	D-BC	535.280	0.148	0.148	0.336	0.235	0.093	0.235	-	0.093	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	163.00	100.000
B	ONE HOUR	✓	200.00	100.000
C	ONE HOUR	✓	257.00	100.000
D	ONE HOUR	✓	0.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	122.71	122.71		
07:45-08:00	B	150.57	150.57		
07:45-08:00	C	193.48	193.48		
07:45-08:00	D	0.00	0.00		
08:00-08:15	A	146.53	146.53		
08:00-08:15	B	179.80	179.80		
08:00-08:15	C	231.04	231.04		
08:00-08:15	D	0.00	0.00		
08:15-08:30	A	179.47	179.47		
08:15-08:30	B	220.20	220.20		
08:15-08:30	C	282.96	282.96		
08:15-08:30	D	0.00	0.00		
08:30-08:45	A	179.47	179.47		
08:30-08:45	B	220.20	220.20		
08:30-08:45	C	282.96	282.96		
08:30-08:45	D	0.00	0.00		
08:45-09:00	A	146.53	146.53		
08:45-09:00	B	179.80	179.80		
08:45-09:00	C	231.04	231.04		
08:45-09:00	D	0.00	0.00		
09:00-09:15	A	122.71	122.71		
09:00-09:15	B	150.57	150.57		
09:00-09:15	C	193.48	193.48		
09:00-09:15	D	0.00	0.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	0.000	160.000	3.000
	B	3.000	0.000	197.000	0.000
	C	155.000	0.000	0.000	102.000
	D	0.000	0.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.00	0.98	0.02
	B	0.02	0.00	0.99	0.00
	C	0.60	0.00	0.00	0.40
	D	0.25	0.25	0.25	0.25

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.25	5.66	0.34	A
B-AD	0.01	7.38	0.01	A
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.01	5.75	0.01	A
D-A	0.00	0.00	0.00	A
D-BC	0.00	0.00	0.00	A
C-ABD	0.00	0.00	0.00	A
C-D	-	-	-	-
C-A	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	148.31	147.50	0.00	871.96	0.170	0.20	4.964	A
B-AD	2.26	2.24	0.00	519.86	0.004	0.00	6.954	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	120.46	120.46	0.00	-	-	-	-	-
A-D	2.26	2.24	0.00	653.12	0.003	0.00	5.530	A
D-A	0.00	0.00	0.00	660.35	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	481.61	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	631.25	0.000	0.00	0.000	A
C-D	76.79	76.79	0.00	-	-	-	-	-
C-A	116.69	116.69	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	177.10	176.89	0.00	863.86	0.205	0.26	5.239	A
B-AD	2.70	2.69	0.00	507.74	0.005	0.01	7.127	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	143.84	143.84	0.00	-	-	-	-	-
A-D	2.70	2.69	0.00	643.22	0.004	0.00	5.619	A
D-A	0.00	0.00	0.00	652.86	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	471.18	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	625.54	0.000	0.00	0.000	A
C-D	91.70	91.70	0.00	-	-	-	-	-
C-A	139.34	139.34	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	216.90	216.57	0.00	852.65	0.254	0.34	5.657	A
B-AD	3.30	3.30	0.00	490.80	0.007	0.01	7.383	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	176.16	176.16	0.00	-	-	-	-	-
A-D	3.30	3.30	0.00	629.55	0.005	0.01	5.747	A
D-A	0.00	0.00	0.00	642.50	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	456.77	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	617.64	0.000	0.00	0.000	A
C-D	112.30	112.30	0.00	-	-	-	-	-
C-A	170.66	170.66	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	216.90	216.90	0.00	852.65	0.254	0.34	5.662	A
B-AD	3.30	3.30	0.00	490.79	0.007	0.01	7.383	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	176.16	176.16	0.00	-	-	-	-	-
A-D	3.30	3.30	0.00	629.55	0.005	0.01	5.747	A
D-A	0.00	0.00	0.00	642.50	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	456.77	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	617.64	0.000	0.00	0.000	A
C-D	112.30	112.30	0.00	-	-	-	-	-
C-A	170.66	170.66	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	177.10	177.42	0.00	863.85	0.205	0.26	5.248	A
B-AD	2.70	2.70	0.00	507.74	0.005	0.01	7.130	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	143.84	143.84	0.00	-	-	-	-	-
A-D	2.70	2.70	0.00	643.22	0.004	0.00	5.619	A
D-A	0.00	0.00	0.00	652.85	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	471.18	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	625.54	0.000	0.00	0.000	A
C-D	91.70	91.70	0.00	-	-	-	-	-
C-A	139.34	139.34	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	148.31	148.53	0.00	871.95	0.170	0.21	4.979	A
B-AD	2.26	2.26	0.00	519.86	0.004	0.00	6.954	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	120.46	120.46	0.00	-	-	-	-	-
A-D	2.26	2.26	0.00	653.11	0.003	0.00	5.532	A
D-A	0.00	0.00	0.00	660.34	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	481.60	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	631.25	0.000	0.00	0.000	A
C-D	76.79	76.79	0.00	-	-	-	-	-
C-A	116.69	116.69	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, PM	2023 Base	PM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	J7 A55	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	5.85	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	O3/O2 D3/D2 J7 East Junction		Major
B	B	O4 W Bound Off Slip		Minor
C	C	O1/D1 A5152		Major
D	D	D4 W Bound On		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.06		0.00		2.20	224.63		
C	7.06		0.00		2.20	149.70	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.75	5.44	4.86	4.47	✓	3.00	168	234
D	One lane plus flare				10.00	10.00	5.20	4.01	2.20	✓	2.00	0	0

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	704.048	-	-	-	0.260	0.260	0.260	-	0.260	-	-
1	B-AD	581.569	0.101	0.255	-	-	-	0.161	0.365	0.161	0.101	0.255
1	B-C	913.863	0.134	0.338	-	-	-	-	-	-	0.134	0.338
1	C-B	660.657	0.244	0.244	-	-	-	-	-	-	0.244	0.244
1	D-A	698.922	-	-	-	0.258	0.102	0.258	-	0.102	-	-
1	D-BC	535.280	0.148	0.148	0.336	0.235	0.093	0.235	-	0.093	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	121.00	100.000
B	ONE HOUR	✓	230.00	100.000
C	ONE HOUR	✓	340.00	100.000
D	ONE HOUR	✓	0.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	91.10	91.10		
07:45-08:00	B	173.16	173.16		
07:45-08:00	C	255.97	255.97		
07:45-08:00	D	0.00	0.00		
08:00-08:15	A	108.78	108.78		
08:00-08:15	B	206.77	206.77		
08:00-08:15	C	305.65	305.65		
08:00-08:15	D	0.00	0.00		
08:15-08:30	A	133.22	133.22		
08:15-08:30	B	253.23	253.23		
08:15-08:30	C	374.35	374.35		
08:15-08:30	D	0.00	0.00		
08:30-08:45	A	133.22	133.22		
08:30-08:45	B	253.23	253.23		
08:30-08:45	C	374.35	374.35		
08:30-08:45	D	0.00	0.00		
08:45-09:00	A	108.78	108.78		
08:45-09:00	B	206.77	206.77		
08:45-09:00	C	305.65	305.65		
08:45-09:00	D	0.00	0.00		
09:00-09:15	A	91.10	91.10		
09:00-09:15	B	173.16	173.16		
09:00-09:15	C	255.97	255.97		
09:00-09:15	D	0.00	0.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	0.000	121.000	0.000
	B	3.000	0.000	227.000	0.000
	C	243.000	0.000	0.000	97.000
	D	0.000	0.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.00	1.00	0.00
	B	0.01	0.00	0.99	0.00
	C	0.71	0.00	0.00	0.29
	D	0.25	0.25	0.25	0.25

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.29	5.83	0.40	A
B-AD	0.01	7.45	0.01	A
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.00	0.00	0.00	A
D-A	0.00	0.00	0.00	A
D-BC	0.00	0.00	0.00	A
C-ABD	0.00	0.00	0.00	A
C-D	-	-	-	-
C-A	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	170.90	169.94	0.00	882.13	0.194	0.24	5.049	A
B-AD	2.26	2.24	0.00	517.04	0.004	0.00	6.992	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	91.10	91.10	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	636.86	0.000	0.00	0.000	A
D-A	0.00	0.00	0.00	643.62	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	471.48	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	638.41	0.000	0.00	0.000	A
C-D	73.03	73.03	0.00	-	-	-	-	-
C-A	182.94	182.94	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	204.07	203.82	0.00	875.94	0.233	0.30	5.355	A
B-AD	2.70	2.69	0.00	504.33	0.005	0.01	7.175	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	108.78	108.78	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	623.81	0.000	0.00	0.000	A
D-A	0.00	0.00	0.00	632.88	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	459.10	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	634.10	0.000	0.00	0.000	A
C-D	87.20	87.20	0.00	-	-	-	-	-
C-A	218.45	218.45	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	249.93	249.53	0.00	867.38	0.288	0.40	5.822	A
B-AD	3.30	3.30	0.00	486.43	0.007	0.01	7.450	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	133.22	133.22	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	605.78	0.000	0.00	0.000	A
D-A	0.00	0.00	0.00	618.04	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	441.98	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	628.13	0.000	0.00	0.000	A
C-D	106.80	106.80	0.00	-	-	-	-	-
C-A	267.55	267.55	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	249.93	249.92	0.00	867.38	0.288	0.40	5.829	A
B-AD	3.30	3.30	0.00	486.42	0.007	0.01	7.450	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	133.22	133.22	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	605.77	0.000	0.00	0.000	A
D-A	0.00	0.00	0.00	618.04	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	441.97	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	628.13	0.000	0.00	0.000	A
C-D	106.80	106.80	0.00	-	-	-	-	-
C-A	267.55	267.55	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	204.07	204.46	0.00	875.94	0.233	0.31	5.365	A
B-AD	2.70	2.70	0.00	504.33	0.005	0.01	7.175	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	108.78	108.78	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	623.81	0.000	0.00	0.000	A
D-A	0.00	0.00	0.00	632.88	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	459.09	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	634.10	0.000	0.00	0.000	A
C-D	87.20	87.20	0.00	-	-	-	-	-
C-A	218.45	218.45	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	170.90	171.15	0.00	882.12	0.194	0.24	5.064	A
B-AD	2.26	2.26	0.00	517.04	0.004	0.00	6.992	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	91.10	91.10	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	636.85	0.000	0.00	0.000	A
D-A	0.00	0.00	0.00	643.61	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	471.48	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	638.41	0.000	0.00	0.000	A
C-D	73.03	73.03	0.00	-	-	-	-	-
C-A	182.94	182.94	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, AM	2023 Base + Dev	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	J7 A55	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	6.85	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	O3/O2 D3/D2 J7 East Junction		Major
B	B	O4 W Bound Off Slip		Minor
C	C	O1/D1 A5152		Major
D	D	D4 W Bound On		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.06		0.00		2.20	224.63		
C	7.06		0.00		2.20	149.70	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.75	5.44	4.86	4.47	✓	3.00	168	234
D	One lane plus flare				10.00	10.00	5.20	4.01	2.20	✓	2.00	0	0

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	704.048	-	-	-	0.260	0.260	0.260	-	0.260	-	-
1	B-AD	581.191	0.101	0.255	-	-	-	0.161	0.365	0.161	0.101	0.255
1	B-C	914.307	0.134	0.338	-	-	-	-	-	-	0.134	0.338
1	C-B	660.657	0.244	0.244	-	-	-	-	-	-	0.244	0.244
1	D-A	698.922	-	-	-	0.258	0.102	0.258	-	0.102	-	-
1	D-BC	535.280	0.148	0.148	0.336	0.235	0.093	0.235	-	0.093	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	163.00	100.000
B	ONE HOUR	✓	301.00	100.000
C	ONE HOUR	✓	358.00	100.000
D	ONE HOUR	✓	0.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	122.71	122.71		
07:45-08:00	B	226.61	226.61		
07:45-08:00	C	269.52	269.52		
07:45-08:00	D	0.00	0.00		
08:00-08:15	A	146.53	146.53		
08:00-08:15	B	270.59	270.59		
08:00-08:15	C	321.83	321.83		
08:00-08:15	D	0.00	0.00		
08:15-08:30	A	179.47	179.47		
08:15-08:30	B	331.41	331.41		
08:15-08:30	C	394.17	394.17		
08:15-08:30	D	0.00	0.00		
08:30-08:45	A	179.47	179.47		
08:30-08:45	B	331.41	331.41		
08:30-08:45	C	394.17	394.17		
08:30-08:45	D	0.00	0.00		
08:45-09:00	A	146.53	146.53		
08:45-09:00	B	270.59	270.59		
08:45-09:00	C	321.83	321.83		
08:45-09:00	D	0.00	0.00		
09:00-09:15	A	122.71	122.71		
09:00-09:15	B	226.61	226.61		
09:00-09:15	C	269.52	269.52		
09:00-09:15	D	0.00	0.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	0.000	160.000	3.000
	B	3.000	0.000	298.000	0.000
	C	256.000	0.000	0.000	102.000
	D	0.000	0.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.00	0.98	0.02
	B	0.01	0.00	0.99	0.00
	C	0.72	0.00	0.00	0.28
	D	0.25	0.25	0.25	0.25

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.38	6.85	0.62	A
B-AD	0.01	7.73	0.01	A
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.01	6.03	0.01	A
D-A	0.00	0.00	0.00	A
D-BC	0.00	0.00	0.00	A
C-ABD	0.00	0.00	0.00	A
C-D	-	-	-	-
C-A	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	224.35	222.98	0.00	872.63	0.257	0.34	5.530	A
B-AD	2.26	2.24	0.00	506.61	0.004	0.00	7.136	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	120.46	120.46	0.00	-	-	-	-	-
A-D	2.26	2.24	0.00	633.33	0.004	0.00	5.703	A
D-A	0.00	0.00	0.00	640.71	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	463.73	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	631.25	0.000	0.00	0.000	A
C-D	76.79	76.79	0.00	-	-	-	-	-
C-A	192.73	192.73	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	267.90	267.49	0.00	864.51	0.310	0.44	6.026	A
B-AD	2.70	2.69	0.00	491.39	0.005	0.01	7.365	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	143.84	143.84	0.00	-	-	-	-	-
A-D	2.70	2.69	0.00	619.60	0.004	0.00	5.834	A
D-A	0.00	0.00	0.00	629.40	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	449.84	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	625.54	0.000	0.00	0.000	A
C-D	91.70	91.70	0.00	-	-	-	-	-
C-A	230.14	230.14	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	328.10	327.41	0.00	853.27	0.385	0.62	6.838	A
B-AD	3.30	3.30	0.00	468.93	0.007	0.01	7.731	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	176.16	176.16	0.00	-	-	-	-	-
A-D	3.30	3.30	0.00	600.62	0.006	0.01	6.026	A
D-A	0.00	0.00	0.00	613.78	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	430.63	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	617.64	0.000	0.00	0.000	A
C-D	112.30	112.30	0.00	-	-	-	-	-
C-A	281.86	281.86	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	328.10	328.09	0.00	853.27	0.385	0.62	6.854	A
B-AD	3.30	3.30	0.00	468.89	0.007	0.01	7.731	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	176.16	176.16	0.00	-	-	-	-	-
A-D	3.30	3.30	0.00	600.62	0.006	0.01	6.026	A
D-A	0.00	0.00	0.00	613.78	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	430.63	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	617.64	0.000	0.00	0.000	A
C-D	112.30	112.30	0.00	-	-	-	-	-
C-A	281.86	281.86	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	267.90	268.57	0.00	864.50	0.310	0.45	6.047	A
B-AD	2.70	2.70	0.00	491.36	0.005	0.01	7.369	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	143.84	143.84	0.00	-	-	-	-	-
A-D	2.70	2.70	0.00	619.60	0.004	0.00	5.837	A
D-A	0.00	0.00	0.00	629.40	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	449.83	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	625.54	0.000	0.00	0.000	A
C-D	91.70	91.70	0.00	-	-	-	-	-
C-A	230.14	230.14	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	224.35	224.77	0.00	872.62	0.257	0.35	5.559	A
B-AD	2.26	2.26	0.00	506.59	0.004	0.00	7.140	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	120.46	120.46	0.00	-	-	-	-	-
A-D	2.26	2.26	0.00	633.32	0.004	0.00	5.706	A
D-A	0.00	0.00	0.00	640.70	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	463.72	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	631.25	0.000	0.00	0.000	A
C-D	76.79	76.79	0.00	-	-	-	-	-
C-A	192.73	192.73	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, PM	2023 Base + Dev	PM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	J7 A55	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	7.11	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	O3/O2 D3/D2 J7 East Junction		Major
B	B	O4 W Bound Off Slip		Minor
C	C	O1/D1 A5152		Major
D	D	D4 W Bound On		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.06		0.00		2.20	224.63		
C	7.06		0.00		2.20	149.70	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.75	5.44	4.86	4.47	✓	3.00	168	234
D	One lane plus flare				10.00	10.00	5.20	4.01	2.20	✓	2.00	0	0

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	704.048	-	-	-	0.260	0.260	0.260	-	0.260	-	-
1	B-AD	581.081	0.101	0.255	-	-	-	0.161	0.365	0.161	0.101	0.255
1	B-C	914.437	0.134	0.338	-	-	-	-	-	-	0.134	0.338
1	C-B	660.657	0.244	0.244	-	-	-	-	-	-	0.244	0.244
1	D-A	698.922	-	-	-	0.258	0.102	0.258	-	0.102	-	-
1	D-BC	535.280	0.148	0.148	0.336	0.235	0.093	0.235	-	0.093	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	121.00	100.000
B	ONE HOUR	✓	331.00	100.000
C	ONE HOUR	✓	441.00	100.000
D	ONE HOUR	✓	0.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	91.10	91.10		
07:45-08:00	B	249.19	249.19		
07:45-08:00	C	332.01	332.01		
07:45-08:00	D	0.00	0.00		
08:00-08:15	A	108.78	108.78		
08:00-08:15	B	297.56	297.56		
08:00-08:15	C	396.45	396.45		
08:00-08:15	D	0.00	0.00		
08:15-08:30	A	133.22	133.22		
08:15-08:30	B	364.44	364.44		
08:15-08:30	C	485.55	485.55		
08:15-08:30	D	0.00	0.00		
08:30-08:45	A	133.22	133.22		
08:30-08:45	B	364.44	364.44		
08:30-08:45	C	485.55	485.55		
08:30-08:45	D	0.00	0.00		
08:45-09:00	A	108.78	108.78		
08:45-09:00	B	297.56	297.56		
08:45-09:00	C	396.45	396.45		
08:45-09:00	D	0.00	0.00		
09:00-09:15	A	91.10	91.10		
09:00-09:15	B	249.19	249.19		
09:00-09:15	C	332.01	332.01		
09:00-09:15	D	0.00	0.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	0.000	121.000	0.000
	B	3.000	0.000	328.000	0.000
	C	344.000	0.000	0.000	97.000
	D	0.000	0.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.00	1.00	0.00
	B	0.01	0.00	0.99	0.00
	C	0.78	0.00	0.00	0.22
	D	0.25	0.25	0.25	0.25

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.42	7.10	0.71	A
B-AD	0.01	7.83	0.01	A
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.00	0.00	0.00	A
D-A	0.00	0.00	0.00	A
D-BC	0.00	0.00	0.00	A
C-ABD	0.00	0.00	0.00	A
C-D	-	-	-	-
C-A	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	246.94	245.40	0.00	882.66	0.280	0.39	5.635	A
B-AD	2.26	2.24	0.00	503.69	0.004	0.00	7.178	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	91.10	91.10	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	617.07	0.000	0.00	0.000	A
D-A	0.00	0.00	0.00	623.98	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	453.61	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	638.41	0.000	0.00	0.000	A
C-D	73.03	73.03	0.00	-	-	-	-	-
C-A	258.98	258.98	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	294.87	294.40	0.00	876.46	0.336	0.50	6.179	A
B-AD	2.70	2.69	0.00	487.55	0.006	0.01	7.423	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	108.78	108.78	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	600.18	0.000	0.00	0.000	A
D-A	0.00	0.00	0.00	609.43	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	437.75	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	634.10	0.000	0.00	0.000	A
C-D	87.20	87.20	0.00	-	-	-	-	-
C-A	309.25	309.25	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	361.13	360.33	0.00	867.87	0.416	0.70	7.081	A
B-AD	3.30	3.30	0.00	463.22	0.007	0.01	7.827	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	133.22	133.22	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	576.84	0.000	0.00	0.000	A
D-A	0.00	0.00	0.00	589.31	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	415.84	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	628.13	0.000	0.00	0.000	A
C-D	106.80	106.80	0.00	-	-	-	-	-
C-A	378.75	378.75	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	361.13	361.12	0.00	867.87	0.416	0.71	7.103	A
B-AD	3.30	3.30	0.00	463.16	0.007	0.01	7.828	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	133.22	133.22	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	576.84	0.000	0.00	0.000	A
D-A	0.00	0.00	0.00	589.31	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	415.83	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	628.13	0.000	0.00	0.000	A
C-D	106.80	106.80	0.00	-	-	-	-	-
C-A	378.75	378.75	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	294.87	295.65	0.00	876.45	0.336	0.51	6.208	A
B-AD	2.70	2.70	0.00	487.50	0.006	0.01	7.424	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	108.78	108.78	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	600.18	0.000	0.00	0.000	A
D-A	0.00	0.00	0.00	609.42	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	437.75	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	634.10	0.000	0.00	0.000	A
C-D	87.20	87.20	0.00	-	-	-	-	-
C-A	309.25	309.25	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	246.94	247.42	0.00	882.65	0.280	0.39	5.670	A
B-AD	2.26	2.26	0.00	503.65	0.004	0.00	7.179	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	91.10	91.10	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	617.06	0.000	0.00	0.000	A
D-A	0.00	0.00	0.00	623.97	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	453.60	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	638.41	0.000	0.00	0.000	A
C-D	73.03	73.03	0.00	-	-	-	-	-
C-A	258.98	258.98	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev + Seasonality, AM Aug

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev + Seasonality, AM Aug	2023 Base + Dev + Seasonality	AM Aug		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	J7 A55	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	8.38	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	O3/O2 D3/D2 J7 East Junction		Major
B	B	O4 W Bound Off Slip		Minor
C	C	O1/D1 A5152		Major
D	D	D4 W Bound On		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.06		0.00		2.20	224.63		
C	7.06		0.00		2.20	149.70	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.75	5.44	4.86	4.47	✓	3.00	168	234
D	One lane plus flare				10.00	10.00	5.20	4.01	2.20	✓	2.00	0	0

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	704.048	-	-	-	0.260	0.260	0.260	-	0.260	-	-
1	B-AD	581.622	0.101	0.255	-	-	-	0.161	0.365	0.161	0.101	0.255
1	B-C	913.800	0.134	0.338	-	-	-	-	-	-	0.134	0.338
1	C-B	660.657	0.244	0.244	-	-	-	-	-	-	0.244	0.244
1	D-A	698.922	-	-	-	0.258	0.102	0.258	-	0.102	-	-
1	D-BC	535.280	0.148	0.148	0.336	0.235	0.093	0.235	-	0.093	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	219.00	100.000
B	ONE HOUR	✓	371.00	100.000
C	ONE HOUR	✓	445.00	100.000
D	ONE HOUR	✓	0.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	164.87	164.87		
07:45-08:00	B	279.31	279.31		
07:45-08:00	C	335.02	335.02		
07:45-08:00	D	0.00	0.00		
08:00-08:15	A	196.88	196.88		
08:00-08:15	B	333.52	333.52		
08:00-08:15	C	400.05	400.05		
08:00-08:15	D	0.00	0.00		
08:15-08:30	A	241.12	241.12		
08:15-08:30	B	408.48	408.48		
08:15-08:30	C	489.95	489.95		
08:15-08:30	D	0.00	0.00		
08:30-08:45	A	241.12	241.12		
08:30-08:45	B	408.48	408.48		
08:30-08:45	C	489.95	489.95		
08:30-08:45	D	0.00	0.00		
08:45-09:00	A	196.88	196.88		
08:45-09:00	B	333.52	333.52		
08:45-09:00	C	400.05	400.05		
08:45-09:00	D	0.00	0.00		
09:00-09:15	A	164.87	164.87		
09:00-09:15	B	279.31	279.31		
09:00-09:15	C	335.02	335.02		
09:00-09:15	D	0.00	0.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	0.000	215.000	4.000
	B	5.000	0.000	366.000	0.000
	C	308.000	0.000	0.000	137.000
	D	0.000	0.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.00	0.98	0.02
	B	0.01	0.00	0.99	0.00
	C	0.69	0.00	0.00	0.31
	D	0.25	0.25	0.25	0.25

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.48	8.40	0.93	A
B-AD	0.01	8.47	0.01	A
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.01	6.31	0.01	A
D-A	0.00	0.00	0.00	A
D-BC	0.00	0.00	0.00	A
C-ABD	0.00	0.00	0.00	A
C-D	-	-	-	-
C-A	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	275.54	273.67	0.00	857.47	0.321	0.47	6.146	A
B-AD	3.76	3.73	0.00	484.82	0.008	0.01	7.482	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	161.86	161.86	0.00	-	-	-	-	-
A-D	3.01	2.99	0.00	615.89	0.005	0.00	5.873	A
D-A	0.00	0.00	0.00	627.51	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	445.35	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	621.14	0.000	0.00	0.000	A
C-D	103.14	103.14	0.00	-	-	-	-	-
C-A	231.88	231.88	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	329.03	328.39	0.00	846.47	0.389	0.63	6.940	A
B-AD	4.49	4.49	0.00	463.81	0.010	0.01	7.837	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	193.28	193.28	0.00	-	-	-	-	-
A-D	3.60	3.59	0.00	598.78	0.006	0.01	6.047	A
D-A	0.00	0.00	0.00	613.64	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	427.88	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	613.46	0.000	0.00	0.000	A
C-D	123.16	123.16	0.00	-	-	-	-	-
C-A	276.89	276.89	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	402.97	401.79	0.00	831.24	0.485	0.92	8.359	A
B-AD	5.51	5.49	0.00	430.53	0.013	0.01	8.469	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	236.72	236.72	0.00	-	-	-	-	-
A-D	4.40	4.40	0.00	575.12	0.008	0.01	6.307	A
D-A	0.00	0.00	0.00	594.48	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	403.74	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	602.86	0.000	0.00	0.000	A
C-D	150.84	150.84	0.00	-	-	-	-	-
C-A	339.11	339.11	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	402.97	402.94	0.00	831.24	0.485	0.93	8.404	A
B-AD	5.51	5.50	0.00	430.35	0.013	0.01	8.473	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	236.72	236.72	0.00	-	-	-	-	-
A-D	4.40	4.40	0.00	575.11	0.008	0.01	6.307	A
D-A	0.00	0.00	0.00	594.48	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	403.74	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	602.86	0.000	0.00	0.000	A
C-D	150.84	150.84	0.00	-	-	-	-	-
C-A	339.11	339.11	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	329.03	330.18	0.00	846.46	0.389	0.64	6.990	A
B-AD	4.49	4.51	0.00	463.69	0.010	0.01	7.841	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	193.28	193.28	0.00	-	-	-	-	-
A-D	3.60	3.60	0.00	598.77	0.006	0.01	6.048	A
D-A	0.00	0.00	0.00	613.64	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	427.87	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	613.46	0.000	0.00	0.000	A
C-D	123.16	123.16	0.00	-	-	-	-	-
C-A	276.89	276.89	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	275.54	276.21	0.00	857.45	0.321	0.48	6.202	A
B-AD	3.76	3.77	0.00	484.74	0.008	0.01	7.486	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	161.86	161.86	0.00	-	-	-	-	-
A-D	3.01	3.02	0.00	615.88	0.005	0.00	5.875	A
D-A	0.00	0.00	0.00	627.50	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	445.33	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	621.14	0.000	0.00	0.000	A
C-D	103.14	103.14	0.00	-	-	-	-	-
C-A	231.88	231.88	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev + Seasonality, PM Aug

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev + Seasonality, PM Aug	2023 Base + Dev + Seasonality	PM Aug		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	J7 A55	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D	8.89	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	O3/O2 D3/D2 J7 East Junction		Major
B	B	O4 W Bound Off Slip		Minor
C	C	O1/D1 A5152		Major
D	D	D4 W Bound On		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.06		0.00		2.20	224.63		
C	7.06		0.00		2.20	149.70	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.75	5.44	4.86	4.47	✓	3.00	168	234
D	One lane plus flare				10.00	10.00	5.20	4.01	2.20	✓	2.00	0	0

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	704.048	-	-	-	0.260	0.260	0.260	-	0.260	-	-
1	B-AD	581.166	0.101	0.255	-	-	-	0.161	0.365	0.161	0.101	0.255
1	B-C	914.337	0.134	0.338	-	-	-	-	-	-	0.134	0.338
1	C-B	660.657	0.244	0.244	-	-	-	-	-	-	0.244	0.244
1	D-A	698.922	-	-	-	0.258	0.102	0.258	-	0.102	-	-
1	D-BC	535.280	0.148	0.148	0.336	0.235	0.093	0.235	-	0.093	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	162.00	100.000
B	ONE HOUR	✓	410.00	100.000
C	ONE HOUR	✓	557.00	100.000
D	ONE HOUR	✓	0.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	121.96	121.96		
07:45-08:00	B	308.67	308.67		
07:45-08:00	C	419.34	419.34		
07:45-08:00	D	0.00	0.00		
08:00-08:15	A	145.63	145.63		
08:00-08:15	B	368.58	368.58		
08:00-08:15	C	500.73	500.73		
08:00-08:15	D	0.00	0.00		
08:15-08:30	A	178.37	178.37		
08:15-08:30	B	451.42	451.42		
08:15-08:30	C	613.27	613.27		
08:15-08:30	D	0.00	0.00		
08:30-08:45	A	178.37	178.37		
08:30-08:45	B	451.42	451.42		
08:30-08:45	C	613.27	613.27		
08:30-08:45	D	0.00	0.00		
08:45-09:00	A	145.63	145.63		
08:45-09:00	B	368.58	368.58		
08:45-09:00	C	500.73	500.73		
08:45-09:00	D	0.00	0.00		
09:00-09:15	A	121.96	121.96		
09:00-09:15	B	308.67	308.67		
09:00-09:15	C	419.34	419.34		
09:00-09:15	D	0.00	0.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	0.000	162.000	0.000
	B	4.000	0.000	406.000	0.000
	C	426.000	0.000	0.000	131.000
	D	0.000	0.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.00	1.00	0.00
	B	0.01	0.00	0.99	0.00
	C	0.76	0.00	0.00	0.24
	D	0.25	0.25	0.25	0.25

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.52	8.89	1.09	A
B-AD	0.01	8.68	0.01	A
A-B	-	-	-	-
A-C	-	-	-	-
A-D	0.00	0.00	0.00	A
D-A	0.00	0.00	0.00	A
D-BC	0.00	0.00	0.00	A
C-ABD	0.00	0.00	0.00	A
C-D	-	-	-	-
C-A	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	305.66	303.52	0.00	871.76	0.351	0.53	6.313	A
B-AD	3.01	2.99	0.00	480.20	0.006	0.01	7.543	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	121.96	121.96	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	594.15	0.000	0.00	0.000	A
D-A	0.00	0.00	0.00	605.22	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	431.98	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	630.88	0.000	0.00	0.000	A
C-D	98.62	98.62	0.00	-	-	-	-	-
C-A	320.72	320.72	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	364.99	364.23	0.00	863.43	0.423	0.72	7.201	A
B-AD	3.60	3.59	0.00	457.28	0.008	0.01	7.934	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	145.63	145.63	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	572.81	0.000	0.00	0.000	A
D-A	0.00	0.00	0.00	587.03	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	411.92	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	625.10	0.000	0.00	0.000	A
C-D	117.77	117.77	0.00	-	-	-	-	-
C-A	382.97	382.97	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	447.01	445.57	0.00	851.90	0.525	1.08	8.828	A
B-AD	4.40	4.39	0.00	419.56	0.011	0.01	8.671	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	178.37	178.37	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	543.32	0.000	0.00	0.000	A
D-A	0.00	0.00	0.00	561.88	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	384.20	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	617.11	0.000	0.00	0.000	A
C-D	144.23	144.23	0.00	-	-	-	-	-
C-A	469.03	469.03	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	447.01	446.97	0.00	851.89	0.525	1.09	8.887	A
B-AD	4.40	4.40	0.00	419.28	0.011	0.01	8.676	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	178.37	178.37	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	543.32	0.000	0.00	0.000	A
D-A	0.00	0.00	0.00	561.88	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	384.19	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	617.11	0.000	0.00	0.000	A
C-D	144.23	144.23	0.00	-	-	-	-	-
C-A	469.03	469.03	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	364.99	366.39	0.00	863.43	0.423	0.74	7.262	A
B-AD	3.60	3.61	0.00	457.08	0.008	0.01	7.940	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	145.63	145.63	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	572.81	0.000	0.00	0.000	A
D-A	0.00	0.00	0.00	587.02	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	411.92	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	625.10	0.000	0.00	0.000	A
C-D	117.77	117.77	0.00	-	-	-	-	-
C-A	382.97	382.97	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	305.66	306.44	0.00	871.75	0.351	0.55	6.379	A
B-AD	3.01	3.02	0.00	480.07	0.006	0.01	7.545	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	121.96	121.96	0.00	-	-	-	-	-
A-D	0.00	0.00	0.00	594.14	0.000	0.00	0.000	A
D-A	0.00	0.00	0.00	605.21	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	431.97	0.000	0.00	0.000	A
C-ABD	0.00	0.00	0.00	630.88	0.000	0.00	0.000	A
C-D	98.62	98.62	0.00	-	-	-	-	-
C-A	320.72	320.72	0.00	-	-	-	-	-

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A5_A5152_FINAL_ADVANCED.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A5152 A5
Report generation date: 14/06/2018 12:01:12

- » (Default Analysis Set) - 2017 Base, AM
- » (Default Analysis Set) - 2017 Base, PM
- » (Default Analysis Set) - 2023 Base, AM
- » (Default Analysis Set) - 2023 Base, PM
- » (Default Analysis Set) - 2023 Base + Dev, AM
- » (Default Analysis Set) - 2023 Base + Dev, PM
- » (Default Analysis Set) - 2023 Base + Dev + seasonality, PM Aug

Summary of junction performance

	AM				PM				PM Aug			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2017 Base												
Arm A5 E	0.09	2.26	0.08	A	0.12	2.29	0.11	A				
Arm A5 W	0.32	2.68	0.24	A	0.20	2.44	0.17	A				
Arm 5152	0.21	2.24	0.18	A	0.21	2.16	0.17	A				
A1 - 2023 Base												
Arm A5 E	0.09	2.27	0.09	A	0.13	2.31	0.11	A				
Arm A5 W	0.34	2.74	0.26	A	0.22	2.47	0.18	A				
Arm 5152	0.23	2.28	0.19	A	0.22	2.19	0.18	A				
A1 - 2023 Base + Dev												
Arm A5 E	0.18	2.44	0.15	A	0.21	2.49	0.18	A				
Arm A5 W	0.36	2.86	0.26	A	0.22	2.58	0.18	A				
Arm 5152	0.32	2.45	0.24	A	0.31	2.34	0.24	A				
A1 - 2023 Base + Dev + seasonality												
Arm A5 E									0.27	2.65	0.22	A
Arm A5 W									0.33	2.81	0.25	A
Arm 5152									0.43	2.58	0.30	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 07:30 - 09:00
"D2 - 2017 Base, PM" model duration: 15:45 - 17:15
"D3 - 2023 Base, AM" model duration: 07:30 - 09:00
"D4 - 2023 Base, PM" model duration: 15:45 - 17:15
"D5 - 2023 Base + Dev, AM" model duration: 07:30 - 09:00
"D6 - 2023 Base + Dev, PM" model duration: 15:45 - 17:15
"D8 - 2023 Base + Dev + seasonality, PM Aug" model duration: 15:45 - 17:15

Run using Junctions 8.0.6.541 at 14/06/2018 12:01:07

File summary

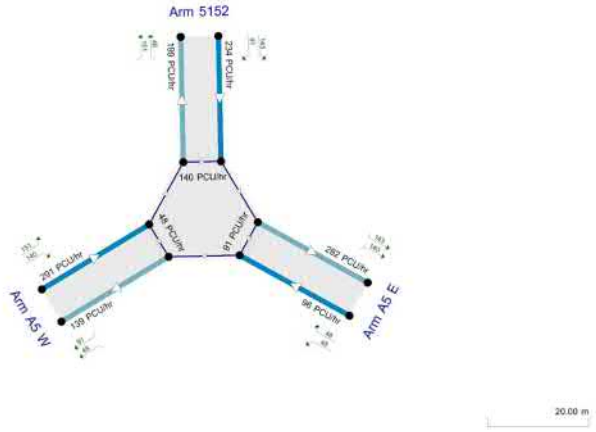
Title	(untitled)
Location	
Site Number	
Date	25/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base, AM	2017 Base	AM		ONE HOUR	07:30	09:00	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	A5 A5152	Roundabout	A5 E,A5 W,5152				2.45	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
A5 E	A5 E	(untitled)	
A5 W	A5 W	(untitled)	
5152	5152	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A5 E	0.00	99999.00		0.00
A5 W	0.00	99999.00		0.00
5152	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A5 E	4.05	6.70	20.50	30.00	68.00	33.00	
A5 W	3.70	7.10	30.00	34.00	68.00	47.00	
5152	4.80	7.60	18.50	33.00	68.00	30.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A5 E		(calculated)	(calculated)	0.533	1805.718
A5 W		(calculated)	(calculated)	0.522	1804.183
5152		(calculated)	(calculated)	0.578	2065.001

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A5 E	ONE HOUR	✓	128.00	100.000
A5 W	ONE HOUR	✓	387.00	100.000
5152	ONE HOUR	✓	311.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	0.000	64.000	64.000
	A5 W	186.000	0.000	201.000
	5152	190.000	121.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	0.00	0.50	0.50
	A5 W	0.48	0.00	0.52
	5152	0.61	0.39	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	1.000	1.000	1.000
	A5 W	1.000	1.000	1.000
	5152	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	0.0	0.0	0.0
	A5 W	0.0	0.0	0.0
	5152	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
A5 E	0.08	2.26	0.09	−1	A	117.46	176.18	6.49	2.21	0.07	6.49	2.21
A5 W	0.24	2.68	0.32	−1	A	355.12	532.68	22.63	2.55	0.25	22.63	2.55
5152	0.18	2.24	0.21	−1	A	285.38	428.07	15.33	2.15	0.17	15.33	2.15

Main Results for each time segment

Main results: (07:30-07:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	96.37	24.09	96.13	282.37	90.89	0.00	1757.27	1459.41	0.055	0.00	0.06	2.167	A
A5 W	291.35	72.84	290.57	138.95	48.07	0.00	1779.09	1423.29	0.164	0.00	0.20	2.417	A
5152	234.14	58.53	233.60	198.98	139.66	0.00	1984.30	1669.73	0.118	0.00	0.13	2.056	A

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	115.07	28.77	115.02	337.85	108.73	0.00	1747.76	1459.41	0.066	0.06	0.07	2.204	A
A5 W	347.91	86.98	347.71	166.24	57.51	0.00	1774.16	1423.29	0.196	0.20	0.24	2.523	A
5152	279.58	69.90	279.46	238.11	167.12	0.00	1968.43	1669.73	0.142	0.13	0.17	2.131	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	140.93	35.23	140.86	413.73	133.15	0.00	1734.74	1459.41	0.081	0.07	0.09	2.258	A
A5 W	426.09	106.52	425.80	203.58	70.43	0.00	1767.42	1423.29	0.241	0.24	0.32	2.683	A
5152	342.42	85.60	342.23	291.58	204.65	0.00	1946.75	1669.73	0.176	0.17	0.21	2.243	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	140.93	35.23	140.93	413.98	133.22	0.00	1734.70	1459.41	0.081	0.09	0.09	2.258	A
A5 W	426.09	106.52	426.09	203.69	70.47	0.00	1767.40	1423.29	0.241	0.32	0.32	2.683	A
5152	342.42	85.60	342.42	291.77	204.79	0.00	1946.67	1669.73	0.176	0.21	0.21	2.243	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	115.07	28.77	115.14	338.27	108.85	0.00	1747.69	1459.41	0.066	0.09	0.07	2.204	A
A5 W	347.91	86.98	348.19	166.42	57.57	0.00	1774.13	1423.29	0.196	0.32	0.24	2.524	A
5152	279.58	69.90	279.77	238.42	167.35	0.00	1968.30	1669.73	0.142	0.21	0.17	2.131	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	96.37	24.09	96.42	283.24	91.14	0.00	1757.13	1459.41	0.055	0.07	0.06	2.167	A
A5 W	291.35	72.84	291.55	139.35	48.21	0.00	1779.02	1423.29	0.164	0.24	0.20	2.420	A
5152	234.14	58.53	234.26	199.63	140.12	0.00	1984.03	1669.73	0.118	0.17	0.13	2.058	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:30-07:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	0.86	0.06	2.167	A	A
A5 W	2.88	0.19	2.417	A	A
5152	1.98	0.13	2.056	A	A

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	1.05	0.07	2.204	A	A
A5 W	3.61	0.24	2.523	A	A
5152	2.45	0.16	2.131	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	1.31	0.09	2.258	A	A
A5 W	4.69	0.31	2.683	A	A
5152	3.16	0.21	2.243	A	A

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	1.32	0.09	2.258	A	A
A5 W	4.75	0.32	2.683	A	A
5152	3.19	0.21	2.243	A	A

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	1.07	0.07	2.204	A	A
A5 W	3.72	0.25	2.524	A	A
5152	2.52	0.17	2.131	A	A

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	0.88	0.06	2.167	A	A
A5 W	2.98	0.20	2.420	A	A
5152	2.03	0.14	2.058	A	A

Queue Variation Results for each time segment

Queue Variation results: (07:30-07:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.06	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.20	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.13	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (07:45-08:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.24	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.17	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:00-08:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.32	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.21	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:15-08:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.32	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.21	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:30-08:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.24	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.17	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:45-09:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.06	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.20	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.13	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base, PM	2017 Base	PM		ONE HOUR	15:45	17:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	A5 A5152	Roundabout	A5 E,A5 W,5152				2.29	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
A5 E	A5 E	(untitled)	
A5 W	A5 W	(untitled)	
5152	5152	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A5 E	0.00	99999.00		0.00
A5 W	0.00	99999.00		0.00
5152	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A5 E	4.05	6.70	20.50	30.00	68.00	33.00	
A5 W	3.70	7.10	30.00	34.00	68.00	47.00	
5152	4.80	7.60	18.50	33.00	68.00	30.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A5 E		(calculated)	(calculated)	0.533	1805.718
A5 W		(calculated)	(calculated)	0.522	1804.183
5152		(calculated)	(calculated)	0.578	2065.001

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A5 E	ONE HOUR	✓	169.00	100.000
A5 W	ONE HOUR	✓	270.00	100.000
5152	ONE HOUR	✓	315.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	0.000	111.000	58.000
	A5 W	77.000	0.000	193.000
	5152	228.000	87.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	0.00	0.66	0.34
	A5 W	0.29	0.00	0.71
	5152	0.72	0.28	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	1.000	1.000	1.000
	A5 W	1.000	1.000	1.000
	5152	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	0.0	0.0	0.0
	A5 W	0.0	0.0	0.0
	5152	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
A5 E	0.11	2.29	0.12	−1	A	155.08	232.62	8.68	2.24	0.10	8.68	2.24
A5 W	0.17	2.44	0.20	−1	A	247.76	371.64	14.61	2.36	0.16	14.61	2.36
5152	0.17	2.16	0.21	−1	A	289.05	433.57	15.03	2.08	0.17	15.03	2.08

Main Results for each time segment

Main results: (15:45-16:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	127.23	31.81	126.92	229.09	65.35	0.00	1770.88	1538.77	0.072	0.00	0.08	2.189	A
A5 W	203.27	50.82	202.76	148.72	43.56	0.00	1781.45	1528.53	0.114	0.00	0.13	2.280	A
5152	237.15	59.29	236.62	188.49	57.82	0.00	2031.59	1813.12	0.117	0.00	0.13	2.005	A

Main results: (16:00-16:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	151.93	37.98	151.86	274.07	78.18	0.00	1764.04	1538.77	0.086	0.08	0.09	2.232	A
A5 W	242.72	60.68	242.61	177.92	52.12	0.00	1776.98	1528.53	0.137	0.13	0.16	2.346	A
5152	283.18	70.79	283.06	225.54	69.19	0.00	2025.02	1813.12	0.140	0.13	0.16	2.066	A

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	186.07	46.52	185.98	335.63	95.74	0.00	1754.68	1538.77	0.106	0.09	0.12	2.294	A
A5 W	297.28	74.32	297.10	217.89	63.83	0.00	1770.87	1528.53	0.168	0.16	0.20	2.442	A
5152	346.82	86.71	346.64	276.20	84.73	0.00	2016.04	1813.12	0.172	0.16	0.21	2.156	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	186.07	46.52	186.07	335.81	95.79	0.00	1754.65	1538.77	0.106	0.12	0.12	2.294	A
A5 W	297.28	74.32	297.27	218.00	63.86	0.00	1770.85	1528.53	0.168	0.20	0.20	2.442	A
5152	346.82	86.71	346.82	276.36	84.78	0.00	2016.01	1813.12	0.172	0.21	0.21	2.156	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	151.93	37.98	152.02	274.37	78.26	0.00	1764.00	1538.77	0.086	0.12	0.09	2.234	A
A5 W	242.72	60.68	242.90	178.11	52.17	0.00	1776.95	1528.53	0.137	0.20	0.16	2.348	A
5152	283.18	70.79	283.36	225.80	69.27	0.00	2024.97	1813.12	0.140	0.21	0.16	2.068	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	127.23	31.81	127.30	229.74	65.53	0.00	1770.78	1538.77	0.072	0.09	0.08	2.190	A
A5 W	203.27	50.82	203.39	149.14	43.69	0.00	1781.38	1528.53	0.114	0.16	0.13	2.281	A
5152	237.15	59.29	237.27	189.07	58.00	0.00	2031.48	1813.12	0.117	0.16	0.13	2.006	A

Queueing Delay Results for each time segment

Queueing Delay results: (15:45-16:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	1.14	0.08	2.189	A	A
A5 W	1.90	0.13	2.280	A	A
5152	1.95	0.13	2.005	A	A

Queueing Delay results: (16:00-16:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	1.40	0.09	2.232	A	A
A5 W	2.34	0.16	2.346	A	A
5152	2.41	0.16	2.066	A	A

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	1.76	0.12	2.294	A	A
A5 W	2.98	0.20	2.442	A	A
5152	3.08	0.21	2.156	A	A

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	1.78	0.12	2.294	A	A
A5 W	3.02	0.20	2.442	A	A
5152	3.11	0.21	2.156	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	1.43	0.10	2.234	A	A
A5 W	2.41	0.16	2.348	A	A
5152	2.47	0.16	2.068	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	1.17	0.08	2.190	A	A
A5 W	1.96	0.13	2.281	A	A
5152	2.01	0.13	2.006	A	A

Queue Variation Results for each time segment

Queue Variation results: (15:45-16:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.08	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.13	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.13	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:00-16:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.16	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.16	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.12	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.20	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.21	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.12	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.20	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.21	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.16	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.16	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.08	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.13	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.13	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base, AM	2023 Base	AM		ONE HOUR	07:30	09:00	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	A5 A5152	Roundabout	A5 E,A5 W,5152				2.49	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
A5 E	A5 E	(untitled)	
A5 W	A5 W	(untitled)	
5152	5152	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A5 E	0.00	99999.00		0.00
A5 W	0.00	99999.00		0.00
5152	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A5 E	4.05	6.70	20.50	30.00	68.00	33.00	
A5 W	3.70	7.10	30.00	34.00	68.00	47.00	
5152	4.80	7.60	18.50	33.00	68.00	30.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A5 E		(calculated)	(calculated)	0.533	1805.718
A5 W		(calculated)	(calculated)	0.522	1804.183
5152		(calculated)	(calculated)	0.578	2065.001

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A5 E	ONE HOUR	✓	134.00	100.000
A5 W	ONE HOUR	✓	410.00	100.000
5152	ONE HOUR	✓	329.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	0.000	67.000	67.000
	A5 W	197.000	0.000	213.000
	5152	201.000	128.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	0.00	0.50	0.50
	A5 W	0.48	0.00	0.52
	5152	0.61	0.39	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	1.000	1.000	1.000
	A5 W	1.000	1.000	1.000
	5152	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	0.0	0.0	0.0
	A5 W	0.0	0.0	0.0
	5152	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
A5 E	0.09	2.27	0.09	−1	A	122.96	184.44	6.83	2.22	0.08	6.83	2.22
A5 W	0.26	2.74	0.34	−1	A	376.22	564.33	24.37	2.59	0.27	24.37	2.59
5152	0.19	2.28	0.23	−1	A	301.90	452.84	16.44	2.18	0.18	16.44	2.18

Main Results for each time segment

Main results: (07:30-07:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	100.88	25.22	100.64	298.88	96.14	0.00	1754.47	1459.39	0.058	0.00	0.06	2.176	A
A5 W	308.67	77.17	307.83	146.46	50.32	0.00	1777.92	1423.30	0.174	0.00	0.21	2.447	A
5152	247.69	61.92	247.12	210.24	147.91	0.00	1979.53	1669.84	0.125	0.00	0.14	2.078	A

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	120.46	30.12	120.41	357.61	115.02	0.00	1744.40	1459.39	0.069	0.06	0.07	2.216	A
A5 W	368.58	92.15	368.37	175.22	60.21	0.00	1772.76	1423.30	0.208	0.21	0.26	2.563	A
5152	295.76	73.94	295.63	251.58	177.00	0.00	1962.73	1669.84	0.151	0.14	0.18	2.159	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	147.54	36.88	147.46	437.92	140.85	0.00	1730.63	1459.40	0.085	0.07	0.09	2.273	A
A5 W	451.42	112.85	451.10	214.58	73.73	0.00	1765.70	1423.30	0.256	0.26	0.34	2.738	A
5152	362.24	90.56	362.03	308.08	216.75	0.00	1939.76	1669.84	0.187	0.18	0.23	2.281	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	147.54	36.88	147.54	438.20	140.93	0.00	1730.59	1459.40	0.085	0.09	0.09	2.273	A
A5 W	451.42	112.85	451.42	214.70	73.77	0.00	1765.68	1423.30	0.256	0.34	0.34	2.738	A
5152	362.24	90.56	362.23	308.28	216.90	0.00	1939.67	1669.84	0.187	0.23	0.23	2.281	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	120.46	30.12	120.54	358.07	115.15	0.00	1744.33	1459.39	0.069	0.09	0.07	2.216	A
A5 W	368.58	92.15	368.90	175.42	60.27	0.00	1772.72	1423.30	0.208	0.34	0.26	2.566	A
5152	295.76	73.94	295.97	251.92	177.25	0.00	1962.58	1669.84	0.151	0.23	0.18	2.161	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	100.88	25.22	100.94	299.82	96.42	0.00	1754.32	1459.39	0.058	0.07	0.06	2.177	A
A5 W	308.67	77.17	308.88	146.89	50.47	0.00	1777.84	1423.30	0.174	0.26	0.21	2.450	A
5152	247.69	61.92	247.83	210.93	148.41	0.00	1979.24	1669.84	0.125	0.18	0.14	2.079	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:30-07:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	0.90	0.06	2.176	A	A
A5 W	3.09	0.21	2.447	A	A
5152	2.11	0.14	2.078	A	A

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	1.10	0.07	2.216	A	A
A5 W	3.88	0.26	2.563	A	A
5152	2.63	0.18	2.159	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	1.38	0.09	2.273	A	A
A5 W	5.07	0.34	2.738	A	A
5152	3.40	0.23	2.281	A	A

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	1.40	0.09	2.273	A	A
A5 W	5.14	0.34	2.738	A	A
5152	3.44	0.23	2.281	A	A

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	1.13	0.08	2.216	A	A
A5 W	4.00	0.27	2.566	A	A
5152	2.70	0.18	2.161	A	A

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	0.93	0.06	2.177	A	A
A5 W	3.20	0.21	2.450	A	A
5152	2.17	0.14	2.079	A	A

Queue Variation Results for each time segment

Queue Variation results: (07:30-07:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.06	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.21	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (07:45-08:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.26	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.18	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:00-08:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.34	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.23	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:15-08:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.34	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.23	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:30-08:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.26	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.18	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:45-09:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.06	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.21	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base, PM	2023 Base	PM		ONE HOUR	15:45	17:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	A5 A5152	Roundabout	A5 E,A5 W,5152				2.32	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
A5 E	A5 E	(untitled)	
A5 W	A5 W	(untitled)	
5152	5152	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A5 E	0.00	99999.00		0.00
A5 W	0.00	99999.00		0.00
5152	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A5 E	4.05	6.70	20.50	30.00	68.00	33.00	
A5 W	3.70	7.10	30.00	34.00	68.00	47.00	
5152	4.80	7.60	18.50	33.00	68.00	30.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A5 E		(calculated)	(calculated)	0.533	1805.718
A5 W		(calculated)	(calculated)	0.522	1804.183
5152		(calculated)	(calculated)	0.578	2065.001

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A5 E	ONE HOUR	✓	178.00	100.000
A5 W	ONE HOUR	✓	285.00	100.000
5152	ONE HOUR	✓	333.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	0.000	117.000	61.000
	A5 W	81.000	0.000	204.000
	5152	241.000	92.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	0.00	0.66	0.34
	A5 W	0.28	0.00	0.72
	5152	0.72	0.28	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	1.000	1.000	1.000
	A5 W	1.000	1.000	1.000
	5152	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	0.0	0.0	0.0
	A5 W	0.0	0.0	0.0
	5152	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
A5 E	0.11	2.31	0.13	−1	A	163.34	245.00	9.21	2.25	0.10	9.21	2.25
A5 W	0.18	2.47	0.22	−1	A	261.52	392.28	15.58	2.38	0.17	15.58	2.38
5152	0.18	2.19	0.22	−1	A	305.57	458.35	16.06	2.10	0.18	16.06	2.10

Main Results for each time segment

Main results: (15:45-16:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	134.01	33.50	133.68	241.86	69.11	0.00	1768.88	1538.57	0.076	0.00	0.08	2.201	A
A5 W	214.56	53.64	214.02	156.98	45.81	0.00	1780.27	1528.96	0.121	0.00	0.14	2.298	A
5152	250.70	62.67	250.14	199.00	60.83	0.00	2029.85	1813.91	0.124	0.00	0.14	2.023	A

Main results: (16:00-16:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	160.02	40.00	159.95	289.34	82.67	0.00	1761.65	1538.57	0.091	0.08	0.10	2.247	A
A5 W	256.21	64.05	256.08	187.80	54.81	0.00	1775.57	1528.96	0.144	0.14	0.17	2.368	A
5152	299.36	74.84	299.23	238.11	72.78	0.00	2022.95	1813.91	0.148	0.14	0.17	2.088	A

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	195.98	49.00	195.88	354.33	101.24	0.00	1751.75	1538.57	0.112	0.10	0.13	2.313	A
A5 W	313.79	78.45	313.60	229.99	67.13	0.00	1769.14	1528.96	0.177	0.17	0.21	2.473	A
5152	366.64	91.66	366.44	291.60	89.13	0.00	2013.50	1813.91	0.182	0.17	0.22	2.185	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	195.98	49.00	195.98	354.53	101.29	0.00	1751.72	1538.57	0.112	0.13	0.13	2.313	A
A5 W	313.79	78.45	313.79	230.11	67.16	0.00	1769.13	1528.96	0.177	0.21	0.22	2.473	A
5152	366.64	91.66	366.64	291.77	89.18	0.00	2013.47	1813.91	0.182	0.22	0.22	2.185	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	160.02	40.00	160.12	289.66	82.76	0.00	1761.60	1538.57	0.091	0.13	0.10	2.247	A
A5 W	256.21	64.05	256.39	188.01	54.87	0.00	1775.54	1528.96	0.144	0.22	0.17	2.371	A
5152	299.36	74.84	299.55	238.40	72.87	0.00	2022.89	1813.91	0.148	0.22	0.17	2.090	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	134.01	33.50	134.08	242.55	69.30	0.00	1768.78	1538.57	0.076	0.10	0.08	2.201	A
A5 W	214.56	53.64	214.69	157.43	45.95	0.00	1780.20	1528.96	0.121	0.17	0.14	2.299	A
5152	250.70	62.67	250.83	199.62	61.02	0.00	2029.74	1813.91	0.124	0.17	0.14	2.025	A

Queueing Delay Results for each time segment

Queueing Delay results: (15:45-16:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	1.21	0.08	2.201	A	A
A5 W	2.02	0.13	2.298	A	A
5152	2.08	0.14	2.023	A	A

Queueing Delay results: (16:00-16:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	1.48	0.10	2.247	A	A
A5 W	2.50	0.17	2.368	A	A
5152	2.58	0.17	2.088	A	A

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	1.87	0.12	2.313	A	A
A5 W	3.19	0.21	2.473	A	A
5152	3.30	0.22	2.185	A	A

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	1.89	0.13	2.313	A	A
A5 W	3.23	0.22	2.473	A	A
5152	3.33	0.22	2.185	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	1.52	0.10	2.247	A	A
A5 W	2.56	0.17	2.371	A	A
5152	2.64	0.18	2.090	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	1.24	0.08	2.201	A	A
A5 W	2.08	0.14	2.299	A	A
5152	2.14	0.14	2.025	A	A

Queue Variation Results for each time segment

Queue Variation results: (15:45-16:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.08	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:00-16:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.10	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.17	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.17	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.13	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.21	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.22	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.13	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.22	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.22	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.10	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.17	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.17	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.08	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base + Dev, AM	2023 Base + Dev	AM		ONE HOUR	07:30	09:00	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	A5 A5152	Roundabout	A5 E,A5 W,5152				2.61	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
A5 E	A5 E	(untitled)	
A5 W	A5 W	(untitled)	
5152	5152	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A5 E	0.00	99999.00		0.00
A5 W	0.00	99999.00		0.00
5152	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A5 E	4.05	6.70	20.50	30.00	68.00	33.00	
A5 W	3.70	7.10	30.00	34.00	68.00	47.00	
5152	4.80	7.60	18.50	33.00	68.00	30.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A5 E		(calculated)	(calculated)	0.533	1805.718
A5 W		(calculated)	(calculated)	0.522	1804.183
5152		(calculated)	(calculated)	0.578	2065.001

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A5 E	ONE HOUR	✓	235.00	100.000
A5 W	ONE HOUR	✓	410.00	100.000
5152	ONE HOUR	✓	430.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	0.000	67.000	168.000
	A5 W	197.000	0.000	213.000
	5152	302.000	128.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	0.00	0.29	0.71
	A5 W	0.48	0.00	0.52
	5152	0.70	0.30	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	1.000	1.000	1.000
	A5 W	1.000	1.000	1.000
	5152	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	0.0	0.0	0.0
	A5 W	0.0	0.0	0.0
	5152	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
A5 E	0.15	2.44	0.18	−1	A	215.64	323.46	12.73	2.36	0.14	12.73	2.36
A5 W	0.26	2.86	0.36	−1	A	376.22	564.33	25.29	2.69	0.28	25.29	2.69
5152	0.24	2.45	0.32	−1	A	394.58	591.86	22.82	2.31	0.25	22.82	2.31

Main Results for each time segment

Main results: (07:30-07:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	176.92	44.23	176.47	374.71	96.13	0.00	1754.47	1532.33	0.101	0.00	0.11	2.281	A
A5 W	308.67	77.17	307.81	146.45	126.16	0.00	1738.33	1232.38	0.178	0.00	0.22	2.515	A
5152	323.73	80.93	322.95	286.07	147.90	0.00	1979.54	1722.84	0.164	0.00	0.19	2.172	A

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	211.26	52.82	211.16	448.34	115.01	0.00	1744.41	1532.33	0.121	0.11	0.14	2.347	A
A5 W	368.58	92.15	368.36	175.21	150.96	0.00	1725.39	1232.38	0.214	0.22	0.27	2.652	A
5152	386.56	96.64	386.36	342.32	176.99	0.00	1962.73	1722.84	0.197	0.19	0.24	2.283	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	258.74	64.68	258.59	549.02	140.84	0.00	1730.64	1532.33	0.150	0.14	0.18	2.445	A
A5 W	451.42	112.85	451.07	214.56	184.86	0.00	1707.69	1232.38	0.264	0.27	0.36	2.865	A
5152	473.44	118.36	473.13	419.20	216.73	0.00	1939.77	1722.84	0.244	0.24	0.32	2.454	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	258.74	64.68	258.74	549.41	140.93	0.00	1730.59	1532.33	0.150	0.18	0.18	2.445	A
A5 W	451.42	112.85	451.42	214.70	184.97	0.00	1707.63	1232.38	0.264	0.36	0.36	2.865	A
5152	473.44	118.36	473.44	419.49	216.90	0.00	1939.67	1722.84	0.244	0.32	0.32	2.454	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	211.26	52.82	211.41	448.97	115.16	0.00	1744.33	1532.33	0.121	0.18	0.14	2.348	A
A5 W	368.58	92.15	368.93	175.43	151.14	0.00	1725.29	1232.38	0.214	0.36	0.27	2.656	A
5152	386.56	96.64	386.87	342.80	177.26	0.00	1962.57	1722.84	0.197	0.32	0.25	2.284	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	176.92	44.23	177.02	375.92	96.42	0.00	1754.32	1532.33	0.101	0.14	0.11	2.283	A
A5 W	308.67	77.17	308.89	146.90	126.55	0.00	1738.12	1232.38	0.178	0.27	0.22	2.518	A
5152	323.73	80.93	323.93	287.03	148.42	0.00	1979.24	1722.84	0.164	0.25	0.20	2.174	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:30-07:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	1.65	0.11	2.281	A	A
A5 W	3.18	0.21	2.515	A	A
5152	2.88	0.19	2.172	A	A

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	2.04	0.14	2.347	A	A
A5 W	4.01	0.27	2.652	A	A
5152	3.63	0.24	2.283	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	2.60	0.17	2.445	A	A
A5 W	5.30	0.35	2.865	A	A
5152	4.77	0.32	2.454	A	A

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	2.63	0.18	2.445	A	A
A5 W	5.37	0.36	2.865	A	A
5152	4.83	0.32	2.454	A	A

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	2.09	0.14	2.348	A	A
A5 W	4.14	0.28	2.656	A	A
5152	3.73	0.25	2.284	A	A

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	1.70	0.11	2.283	A	A
A5 W	3.29	0.22	2.518	A	A
5152	2.97	0.20	2.174	A	A

Queue Variation Results for each time segment

Queue Variation results: (07:30-07:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.11	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.22	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.19	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (07:45-08:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.27	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.24	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:00-08:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.18	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.36	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.32	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:15-08:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.18	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.36	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.32	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:30-08:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.27	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.25	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:45-09:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.11	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.22	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.20	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base + Dev, PM	2023 Base + Dev	PM		ONE HOUR	15:45	17:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	A5 A5152	Roundabout	A5 E,A5 W,5152				2.45	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
A5 E	A5 E	(untitled)	
A5 W	A5 W	(untitled)	
5152	5152	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A5 E	0.00	99999.00		0.00
A5 W	0.00	99999.00		0.00
5152	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A5 E	4.05	6.70	20.50	30.00	68.00	33.00	
A5 W	3.70	7.10	30.00	34.00	68.00	47.00	
5152	4.80	7.60	18.50	33.00	68.00	30.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A5 E		(calculated)	(calculated)	0.533	1805.718
A5 W		(calculated)	(calculated)	0.522	1804.183
5152		(calculated)	(calculated)	0.578	2065.001

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A5 E	ONE HOUR	✓	279.00	100.000
A5 W	ONE HOUR	✓	285.00	100.000
5152	ONE HOUR	✓	434.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	0.000	117.000	162.000
	A5 W	81.000	0.000	204.000
	5152	342.000	92.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		A5 E	A5 W	5152
From	A5 E	0.00	0.42	0.58
	A5 W	0.28	0.00	0.72
	5152	0.79	0.21	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	1.000	1.000	1.000
	A5 W	1.000	1.000	1.000
	5152	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	0.0	0.0	0.0
	A5 W	0.0	0.0	0.0
	5152	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
A5 E	0.18	2.49	0.21	−1	A	256.02	384.02	15.34	2.40	0.17	15.35	2.40
A5 W	0.18	2.58	0.22	−1	A	261.52	392.28	16.11	2.46	0.18	16.11	2.46
5152	0.24	2.34	0.31	−1	A	398.25	597.37	22.17	2.23	0.25	22.18	2.23

Main Results for each time segment

Main results: (15:45-16:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	210.05	52.51	209.51	317.69	69.10	0.00	1768.88	1596.87	0.119	0.00	0.13	2.309	A
A5 W	214.56	53.64	214.00	156.96	121.65	0.00	1740.68	1320.20	0.123	0.00	0.14	2.358	A
5152	326.74	81.68	325.97	274.83	60.82	0.00	2029.86	1848.19	0.161	0.00	0.19	2.111	A

Main results: (16:00-16:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	250.82	62.70	250.69	380.08	82.67	0.00	1761.65	1596.87	0.142	0.13	0.17	2.382	A
A5 W	256.21	64.05	256.08	187.79	145.56	0.00	1728.20	1320.20	0.148	0.14	0.17	2.445	A
5152	390.16	97.54	389.97	328.86	72.78	0.00	2022.95	1848.19	0.193	0.19	0.24	2.204	A

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	307.18	76.80	307.00	465.45	101.23	0.00	1751.75	1596.87	0.175	0.17	0.21	2.491	A
A5 W	313.79	78.45	313.59	229.97	178.26	0.00	1711.14	1320.20	0.183	0.17	0.22	2.575	A
5152	477.84	119.46	477.56	402.72	89.13	0.00	2013.50	1848.19	0.237	0.24	0.31	2.343	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	307.18	76.80	307.18	465.73	101.29	0.00	1751.72	1596.87	0.175	0.21	0.21	2.491	A
A5 W	313.79	78.45	313.79	230.11	178.36	0.00	1711.08	1320.20	0.183	0.22	0.22	2.575	A
5152	477.84	119.46	477.84	402.97	89.18	0.00	2013.47	1848.19	0.237	0.31	0.31	2.343	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	250.82	62.70	251.00	380.55	82.77	0.00	1761.60	1596.87	0.142	0.21	0.17	2.383	A
A5 W	256.21	64.05	256.41	188.02	145.74	0.00	1728.11	1320.20	0.148	0.22	0.17	2.446	A
5152	390.16	97.54	390.44	329.27	72.87	0.00	2022.89	1848.19	0.193	0.31	0.24	2.205	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	210.05	52.51	210.17	318.64	69.30	0.00	1768.77	1596.87	0.119	0.17	0.14	2.311	A
A5 W	214.56	53.64	214.70	157.44	122.03	0.00	1740.48	1320.20	0.123	0.17	0.14	2.361	A
5152	326.74	81.68	326.93	275.71	61.02	0.00	2029.74	1848.19	0.161	0.24	0.19	2.115	A

Queueing Delay Results for each time segment

Queueing Delay results: (15:45-16:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	1.99	0.13	2.309	A	A
A5 W	2.07	0.14	2.358	A	A
5152	2.83	0.19	2.111	A	A

Queueing Delay results: (16:00-16:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	2.46	0.16	2.382	A	A
A5 W	2.58	0.17	2.445	A	A
5152	3.54	0.24	2.204	A	A

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	3.14	0.21	2.491	A	A
A5 W	3.32	0.22	2.575	A	A
5152	4.60	0.31	2.343	A	A

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	3.18	0.21	2.491	A	A
A5 W	3.36	0.22	2.575	A	A
5152	4.66	0.31	2.343	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	2.52	0.17	2.383	A	A
A5 W	2.65	0.18	2.446	A	A
5152	3.63	0.24	2.205	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	2.05	0.14	2.311	A	A
A5 W	2.14	0.14	2.361	A	A
5152	2.91	0.19	2.115	A	A

Queue Variation Results for each time segment

Queue Variation results: (15:45-16:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.13	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.19	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:00-16:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.17	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.17	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.24	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.21	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.22	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.31	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.21	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.22	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.31	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.17	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.17	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.24	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.19	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

(Default Analysis Set) - 2023 Base + Dev + seasonality, PM Aug

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Rel
2023 Base + Dev + seasonality, PM Aug	2023 Base + Dev + seasonality	PM Aug		ONE HOUR	15:45	17:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	A5 A5152	Roundabout	A5 E,A5 W,5152				2.67	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
A5 E	A5 E	(untitled)	
A5 W	A5 W	(untitled)	
5152	5152	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
A5 E	0.00	99999.00		0.00
A5 W	0.00	99999.00		0.00
5152	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A5 E	4.05	6.70	20.50	30.00	68.00	33.00	
A5 W	3.70	7.10	30.00	34.00	68.00	47.00	
5152	4.80	7.60	18.50	33.00	68.00	30.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A5 E		(calculated)	(calculated)	0.533	1805.718
A5 W		(calculated)	(calculated)	0.522	1804.183
5152		(calculated)	(calculated)	0.578	2065.001

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A5 E	ONE HOUR	✓	340.00	100.000
A5 W	ONE HOUR	✓	382.00	100.000
5152	ONE HOUR	✓	547.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	0.000	157.000	183.000
	A5 W	109.000	0.000	273.000
	5152	424.000	123.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	0.00	0.46	0.54
	A5 W	0.29	0.00	0.71
	5152	0.78	0.22	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	1.000	1.000	1.000
	A5 W	1.000	1.000	1.000
	5152	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A5 E	A5 W	5152
From	A5 E	0.0	0.0	0.0
	A5 W	0.0	0.0	0.0
	5152	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
A5 E	0.22	2.65	0.27	−1	A	311.99	467.98	19.66	2.52	0.22	19.66	2.52
A5 W	0.25	2.81	0.33	−1	A	350.53	525.79	23.23	2.65	0.26	23.23	2.65
5152	0.30	2.58	0.43	−1	A	501.94	752.91	30.25	2.41	0.34	30.25	2.41

Main Results for each time segment

Main results: (15:45-16:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	255.97	63.99	255.29	400.25	92.37	0.00	1756.48	1585.04	0.146	0.00	0.17	2.396	A
A5 W	287.59	71.90	286.80	210.25	137.41	0.00	1732.46	1358.87	0.166	0.00	0.20	2.489	A
5152	411.81	102.95	410.79	342.37	81.83	0.00	2017.71	1840.95	0.204	0.00	0.26	2.239	A

Main results: (16:00-16:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	305.65	76.41	305.49	478.89	110.51	0.00	1746.81	1585.04	0.175	0.17	0.21	2.497	A
A5 W	343.41	85.85	343.21	251.58	164.42	0.00	1718.36	1358.87	0.200	0.20	0.25	2.617	A
5152	491.74	122.94	491.47	409.70	97.93	0.00	2008.41	1840.95	0.245	0.26	0.32	2.373	A

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	374.35	93.59	374.09	586.42	135.33	0.00	1733.58	1585.04	0.216	0.21	0.27	2.648	A
A5 W	420.59	105.15	420.27	308.07	201.35	0.00	1699.08	1358.87	0.248	0.25	0.33	2.815	A
5152	602.26	150.56	601.83	501.70	119.92	0.00	1995.71	1840.95	0.302	0.32	0.43	2.583	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	374.35	93.59	374.34	586.84	135.42	0.00	1733.53	1585.04	0.216	0.27	0.27	2.648	A
A5 W	420.59	105.15	420.59	308.28	201.49	0.00	1699.01	1358.87	0.248	0.33	0.33	2.815	A
5152	602.26	150.56	602.25	502.06	120.01	0.00	1995.66	1840.95	0.302	0.43	0.43	2.583	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	305.65	76.41	305.90	479.57	110.67	0.00	1746.72	1585.04	0.175	0.27	0.21	2.498	A
A5 W	343.41	85.85	343.72	251.92	164.65	0.00	1718.24	1358.87	0.200	0.33	0.25	2.621	A
5152	491.74	122.94	492.17	410.29	98.08	0.00	2008.33	1840.95	0.245	0.43	0.33	2.374	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5 E	255.97	63.99	256.14	401.54	92.66	0.00	1756.32	1585.04	0.146	0.21	0.17	2.399	A
A5 W	287.59	71.90	287.79	210.94	137.86	0.00	1732.22	1358.87	0.166	0.25	0.20	2.494	A
5152	411.81	102.95	412.08	343.54	82.12	0.00	2017.55	1840.95	0.204	0.33	0.26	2.244	A

Queueing Delay Results for each time segment

Queueing Delay results: (15:45-16:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	2.51	0.17	2.396	A	A
A5 W	2.93	0.20	2.489	A	A
5152	3.78	0.25	2.239	A	A

Queueing Delay results: (16:00-16:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	3.14	0.21	2.497	A	A
A5 W	3.69	0.25	2.617	A	A
5152	4.79	0.32	2.373	A	A

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	4.07	0.27	2.648	A	A
A5 W	4.85	0.32	2.815	A	A
5152	6.37	0.42	2.583	A	A

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	4.12	0.27	2.648	A	A
A5 W	4.92	0.33	2.815	A	A
5152	6.46	0.43	2.583	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	3.23	0.22	2.498	A	A
A5 W	3.81	0.25	2.621	A	A
5152	4.94	0.33	2.374	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5 E	2.59	0.17	2.399	A	A
A5 W	3.03	0.20	2.494	A	A
5152	3.90	0.26	2.244	A	A

Queue Variation Results for each time segment

Queue Variation results: (15:45-16:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.17	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.20	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.26	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:00-16:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.21	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.25	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.32	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.27	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.33	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.43	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.27	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.33	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.43	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.21	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.25	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.33	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
A5 E	0.17	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A5 W	0.20	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5152	0.26	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: Star_Crossroad_Llandaniel_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\Star Crossroad\Llandaniel
Report generation date: 14/06/2018 12:16:29

- » (Default Analysis Set) - 2017 Base, AM
- » (Default Analysis Set) - 2017 Base, PM
- » (Default Analysis Set) - 2023 Base, AM
- » (Default Analysis Set) - 2023 Base, PM
- » (Default Analysis Set) - 2023 Base + Dev, AM
- » (Default Analysis Set) - 2023 Base + Dev, PM
- » (Default Analysis Set) - 2023 Base + Dev + seasonality, PM Aug

Summary of junction performance

	AM				PM				PM Aug			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2017 Base												
Stream B-C	0.04	6.72	0.04	A	0.05	6.27	0.04	A				
Stream B-A	0.32	10.59	0.25	B	0.11	8.54	0.10	A				
Stream C-AB	0.06	4.51	0.04	A	0.03	4.84	0.03	A				
Stream C-A	-	-	-	-	-	-	-	-				
Stream A-B	-	-	-	-	-	-	-	-				
Stream A-C	-	-	-	-	-	-	-	-				
A1 - 2023 Base												
Stream B-C	0.04	6.79	0.04	A	0.05	6.34	0.05	A				
Stream B-A	0.35	10.86	0.26	B	0.12	8.72	0.11	A				
Stream C-AB	0.06	4.49	0.04	A	0.03	4.83	0.03	A				
Stream C-A	-	-	-	-	-	-	-	-				
Stream A-B	-	-	-	-	-	-	-	-				
Stream A-C	-	-	-	-	-	-	-	-				
A1 - 2023 Base + Dev												
Stream B-C	0.28	7.78	0.22	A	0.30	7.74	0.23	A				
Stream B-A	0.37	11.70	0.27	B	0.14	10.21	0.12	B				
Stream C-AB	0.07	4.59	0.05	A	0.04	4.96	0.03	A				
Stream C-A	-	-	-	-	-	-	-	-				
Stream A-B	-	-	-	-	-	-	-	-				
Stream A-C	-	-	-	-	-	-	-	-				
A1 - 2023 Base + Dev + seasonality												
Stream B-C									0.33	7.93	0.25	A
Stream B-A									0.21	11.69	0.18	B
Stream C-AB									0.06	4.90	0.04	A
Stream C-A									-	-	-	-
Stream A-B									-	-	-	-
Stream A-C									-	-	-	-

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:15 - 17:45
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:15 - 17:45
"D8 - 2023 Base + Dev + seasonality, PM Aug" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 12:16:23

File summary

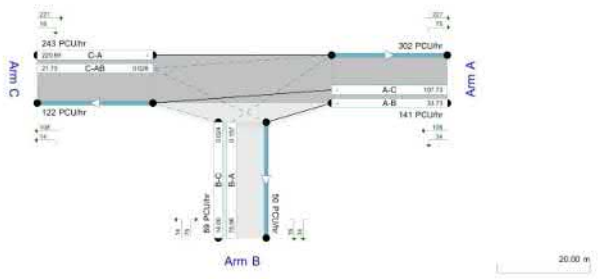
Title	(untitled)
Location	
Site Number	
Date	22/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, AM	2017 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Star-Crossroads	T-Junction	Two-way	A,B,C	8.86	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	NCR 8		Minor
C	C	A5W		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.30		0.00		2.20	250.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	6.10	4.30	3.60	2.70	✓	1.00	19	25

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	551.664	0.095	0.240	0.151	0.342
1	B-C	642.877	0.093	0.235	-	-
1	C-B	718.741	0.263	0.263	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	187.90	100.000
B	ONE HOUR	✓	119.50	100.000
C	ONE HOUR	✓	322.40	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	44.800	143.100
	B	100.900	0.000	18.600
	C	301.100	21.300	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.24	0.76
	B	0.84	0.00	0.16
	C	0.93	0.07	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.04	6.72	0.04	A
B-A	0.25	10.59	0.32	B
C-AB	0.04	4.51	0.06	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	14.00	13.91	0.00	588.19	0.024	0.02	6.269	A
B-A	75.96	75.22	0.00	482.96	0.157	0.18	8.813	A
C-AB	21.73	21.60	0.00	820.47	0.026	0.03	4.506	A
C-A	220.99	220.99	0.00	-	-	-	-	-
A-B	33.73	33.73	0.00	-	-	-	-	-
A-C	107.73	107.73	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	16.72	16.70	0.00	575.39	0.029	0.03	6.443	A
B-A	90.71	90.50	0.00	469.56	0.193	0.24	9.492	A
C-AB	27.49	27.45	0.00	840.39	0.033	0.04	4.428	A
C-A	262.34	262.34	0.00	-	-	-	-	-
A-B	40.27	40.27	0.00	-	-	-	-	-
A-C	128.64	128.64	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	20.48	20.45	0.00	556.13	0.037	0.04	6.720	A
B-A	111.09	110.75	0.00	451.05	0.246	0.32	10.568	B
C-AB	36.34	36.27	0.00	867.75	0.042	0.06	4.329	A
C-A	318.63	318.63	0.00	-	-	-	-	-
A-B	49.33	49.33	0.00	-	-	-	-	-
A-C	157.56	157.56	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	20.48	20.48	0.00	555.94	0.037	0.04	6.722	A
B-A	111.09	111.08	0.00	451.04	0.246	0.32	10.589	B
C-AB	36.35	36.35	0.00	867.77	0.042	0.06	4.330	A
C-A	318.61	318.61	0.00	-	-	-	-	-
A-B	49.33	49.33	0.00	-	-	-	-	-
A-C	157.56	157.56	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	16.72	16.75	0.00	575.14	0.029	0.03	6.446	A
B-A	90.71	91.03	0.00	469.53	0.193	0.24	9.521	A
C-AB	27.52	27.58	0.00	840.42	0.033	0.04	4.429	A
C-A	262.31	262.31	0.00	-	-	-	-	-
A-B	40.27	40.27	0.00	-	-	-	-	-
A-C	128.64	128.64	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	14.00	14.03	0.00	587.80	0.024	0.02	6.273	A
B-A	75.96	76.18	0.00	482.90	0.157	0.19	8.855	A
C-AB	21.78	21.82	0.00	820.50	0.027	0.03	4.507	A
C-A	220.94	220.94	0.00	-	-	-	-	-
A-B	33.73	33.73	0.00	-	-	-	-	-
A-C	107.73	107.73	0.00	-	-	-	-	-

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, PM	2017 Base	PM		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Star-Crossroads	T-Junction	Two-way	A,B,C	7.12	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	NCR 8		Minor
C	C	A5W		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.30		0.00		2.20	250.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	6.10	4.30	3.60	2.70	✓	1.00	19	25

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	567.415	0.098	0.246	0.155	0.352
1	B-C	678.923	0.098	0.248	-	-
1	C-B	718.741	0.263	0.263	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	273.80	100.000
B	ONE HOUR	✓	66.60	100.000
C	ONE HOUR	✓	205.90	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	78.300	195.500
	B	42.300	0.000	24.300
	C	192.600	13.300	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.29	0.71
	B	0.64	0.00	0.36
	C	0.94	0.06	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.04	6.27	0.05	A
B-A	0.10	8.54	0.11	A
C-AB	0.03	4.84	0.03	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	18.29	18.17	0.00	626.31	0.029	0.03	5.920	A
B-A	31.85	31.58	0.00	499.36	0.064	0.07	7.692	A
C-AB	12.30	12.22	0.00	755.50	0.016	0.02	4.843	A
C-A	142.71	142.71	0.00	-	-	-	-	-
A-B	58.95	58.95	0.00	-	-	-	-	-
A-C	147.18	147.18	0.00	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	21.85	21.82	0.00	615.69	0.035	0.04	6.061	A
B-A	38.03	37.96	0.00	486.17	0.078	0.08	8.031	A
C-AB	15.31	15.29	0.00	763.39	0.020	0.02	4.811	A
C-A	169.79	169.79	0.00	-	-	-	-	-
A-B	70.39	70.39	0.00	-	-	-	-	-
A-C	175.75	175.75	0.00	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	26.75	26.72	0.00	600.96	0.045	0.05	6.268	A
B-A	46.57	46.47	0.00	467.87	0.100	0.11	8.541	A
C-AB	19.85	19.82	0.00	774.59	0.026	0.03	4.769	A
C-A	206.85	206.85	0.00	-	-	-	-	-
A-B	86.21	86.21	0.00	-	-	-	-	-
A-C	215.25	215.25	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	26.75	26.75	0.00	600.90	0.045	0.05	6.269	A
B-A	46.57	46.57	0.00	467.88	0.100	0.11	8.544	A
C-AB	19.86	19.86	0.00	774.60	0.026	0.03	4.769	A
C-A	206.84	206.84	0.00	-	-	-	-	-
A-B	86.21	86.21	0.00	-	-	-	-	-
A-C	215.25	215.25	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	21.85	21.88	0.00	615.57	0.035	0.04	6.065	A
B-A	38.03	38.12	0.00	486.19	0.078	0.09	8.035	A
C-AB	15.32	15.36	0.00	763.40	0.020	0.02	4.814	A
C-A	169.78	169.78	0.00	-	-	-	-	-
A-B	70.39	70.39	0.00	-	-	-	-	-
A-C	175.75	175.75	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	18.29	18.32	0.00	626.09	0.029	0.03	5.925	A
B-A	31.85	31.91	0.00	499.41	0.064	0.07	7.701	A
C-AB	12.32	12.34	0.00	755.52	0.016	0.02	4.843	A
C-A	142.70	142.70	0.00	-	-	-	-	-
A-B	58.95	58.95	0.00	-	-	-	-	-
A-C	147.18	147.18	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, AM	2023 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Star-Crossroads	T-Junction	Two-way	A,B,C	9.03	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	NCR 8		Minor
C	C	A5W		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.30		0.00		2.20	250.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	6.10	4.30	3.60	2.70	✓	1.00	19	25

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	551.664	0.095	0.240	0.151	0.342
1	B-C	642.877	0.093	0.235	-	-
1	C-B	718.741	0.263	0.263	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	195.50	100.000
B	ONE HOUR	✓	124.40	100.000
C	ONE HOUR	✓	335.50	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	46.600	148.900
	B	105.000	0.000	19.400
	C	313.300	22.200	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.24	0.76
	B	0.84	0.00	0.16
	C	0.93	0.07	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.04	6.79	0.04	A
B-A	0.26	10.86	0.35	B
C-AB	0.04	4.49	0.06	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	14.61	14.50	0.00	585.66	0.025	0.03	6.303	A
B-A	79.05	78.27	0.00	480.16	0.165	0.19	8.941	A
C-AB	22.92	22.78	0.00	824.63	0.028	0.04	4.490	A
C-A	229.66	229.66	0.00	-	-	-	-	-
A-B	35.08	35.08	0.00	-	-	-	-	-
A-C	112.10	112.10	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	17.44	17.42	0.00	572.09	0.030	0.03	6.489	A
B-A	94.39	94.17	0.00	466.21	0.202	0.25	9.670	A
C-AB	29.06	29.01	0.00	845.34	0.034	0.05	4.409	A
C-A	272.55	272.55	0.00	-	-	-	-	-
A-B	41.89	41.89	0.00	-	-	-	-	-
A-C	133.86	133.86	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	21.36	21.32	0.00	551.49	0.039	0.04	6.789	A
B-A	115.61	115.24	0.00	446.95	0.259	0.34	10.841	B
C-AB	38.50	38.43	0.00	873.75	0.044	0.06	4.311	A
C-A	330.89	330.89	0.00	-	-	-	-	-
A-B	51.31	51.31	0.00	-	-	-	-	-
A-C	163.94	163.94	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	21.36	21.36	0.00	551.28	0.039	0.04	6.792	A
B-A	115.61	115.60	0.00	446.93	0.259	0.35	10.865	B
C-AB	38.52	38.52	0.00	873.77	0.044	0.06	4.312	A
C-A	330.87	330.87	0.00	-	-	-	-	-
A-B	51.31	51.31	0.00	-	-	-	-	-
A-C	163.94	163.94	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	17.44	17.47	0.00	571.81	0.031	0.03	6.496	A
B-A	94.39	94.75	0.00	466.18	0.202	0.26	9.701	A
C-AB	29.08	29.15	0.00	845.38	0.034	0.05	4.412	A
C-A	272.53	272.53	0.00	-	-	-	-	-
A-B	41.89	41.89	0.00	-	-	-	-	-
A-C	133.86	133.86	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	14.61	14.63	0.00	585.24	0.025	0.03	6.311	A
B-A	79.05	79.28	0.00	480.10	0.165	0.20	8.986	A
C-AB	22.97	23.01	0.00	824.67	0.028	0.04	4.490	A
C-A	229.61	229.61	0.00	-	-	-	-	-
A-B	35.08	35.08	0.00	-	-	-	-	-
A-C	112.10	112.10	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, PM	2023 Base	PM		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Star-Crossroads	T-Junction	Two-way	A,B,C	7.23	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	NCR 8		Minor
C	C	A5W		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.30		0.00		2.20	250.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	6.10	4.30	3.60	2.70	✓	1.00	19	25

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	567.213	0.097	0.246	0.155	0.352
1	B-C	679.183	0.098	0.248	-	-
1	C-B	718.741	0.263	0.263	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	289.00	100.000
B	ONE HOUR	✓	71.00	100.000
C	ONE HOUR	✓	216.80	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	83.000	206.000
	B	45.000	0.000	26.000
	C	203.000	13.800	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.29	0.71
	B	0.63	0.00	0.37
	C	0.94	0.06	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.05	6.34	0.05	A
B-A	0.11	8.72	0.12	A
C-AB	0.03	4.83	0.03	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	19.57	19.45	0.00	623.52	0.031	0.03	5.957	A
B-A	33.88	33.59	0.00	495.54	0.068	0.07	7.788	A
C-AB	12.91	12.83	0.00	757.60	0.017	0.02	4.833	A
C-A	150.31	150.31	0.00	-	-	-	-	-
A-B	62.49	62.49	0.00	-	-	-	-	-
A-C	155.09	155.09	0.00	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	23.37	23.34	0.00	612.24	0.038	0.04	6.112	A
B-A	40.45	40.38	0.00	481.64	0.084	0.09	8.157	A
C-AB	16.11	16.09	0.00	765.96	0.021	0.03	4.800	A
C-A	178.79	178.79	0.00	-	-	-	-	-
A-B	74.62	74.62	0.00	-	-	-	-	-
A-C	185.19	185.19	0.00	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	28.63	28.58	0.00	596.59	0.048	0.05	6.337	A
B-A	49.55	49.43	0.00	462.36	0.107	0.12	8.716	A
C-AB	20.95	20.91	0.00	777.84	0.027	0.03	4.755	A
C-A	217.75	217.75	0.00	-	-	-	-	-
A-B	91.38	91.38	0.00	-	-	-	-	-
A-C	226.81	226.81	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	28.63	28.63	0.00	596.52	0.048	0.05	6.338	A
B-A	49.55	49.54	0.00	462.37	0.107	0.12	8.720	A
C-AB	20.96	20.95	0.00	777.85	0.027	0.03	4.758	A
C-A	217.75	217.75	0.00	-	-	-	-	-
A-B	91.38	91.38	0.00	-	-	-	-	-
A-C	226.81	226.81	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	23.37	23.41	0.00	612.12	0.038	0.04	6.117	A
B-A	40.45	40.56	0.00	481.67	0.084	0.09	8.164	A
C-AB	16.12	16.15	0.00	765.97	0.021	0.03	4.803	A
C-A	178.78	178.78	0.00	-	-	-	-	-
A-B	74.62	74.62	0.00	-	-	-	-	-
A-C	185.19	185.19	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	19.57	19.60	0.00	623.28	0.031	0.03	5.965	A
B-A	33.88	33.95	0.00	495.59	0.068	0.07	7.800	A
C-AB	12.93	12.95	0.00	757.61	0.017	0.02	4.834	A
C-A	150.29	150.29	0.00	-	-	-	-	-
A-B	62.49	62.49	0.00	-	-	-	-	-
A-C	155.09	155.09	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, AM	2023 Base + Dev	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Star-Crossroads	T-Junction	Two-way	A,B,C	8.97	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	NCR 8		Minor
C	C	A5W		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.30		0.00		2.20	250.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	6.10	4.30	3.60	2.70	✓	1.00	19	25

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	541.897	0.093	0.235	0.148	0.336
1	B-C	711.829	0.103	0.260	-	-
1	C-B	718.741	0.263	0.263	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	297.00	100.000
B	ONE HOUR	✓	225.00	100.000
C	ONE HOUR	✓	335.30	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	148.000	149.000
	B	105.000	0.000	120.000
	C	313.300	22.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.50	0.50
	B	0.47	0.00	0.53
	C	0.93	0.07	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.22	7.78	0.28	A
B-A	0.27	11.70	0.37	B
C-AB	0.05	4.59	0.07	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	90.34	89.69	0.00	639.35	0.141	0.16	6.539	A
B-A	79.05	78.24	0.00	463.01	0.171	0.20	9.337	A
C-AB	22.91	22.76	0.00	807.15	0.028	0.04	4.590	A
C-A	229.52	229.52	0.00	-	-	-	-	-
A-B	111.42	111.42	0.00	-	-	-	-	-
A-C	112.18	112.18	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	107.88	107.70	0.00	621.93	0.173	0.21	6.999	A
B-A	94.39	94.15	0.00	446.74	0.211	0.26	10.202	B
C-AB	29.14	29.10	0.00	825.05	0.035	0.05	4.522	A
C-A	272.28	272.28	0.00	-	-	-	-	-
A-B	133.05	133.05	0.00	-	-	-	-	-
A-C	133.95	133.95	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	132.12	131.83	0.00	595.38	0.222	0.28	7.761	A
B-A	115.61	115.19	0.00	423.21	0.273	0.37	11.670	B
C-AB	38.84	38.76	0.00	849.85	0.046	0.07	4.438	A
C-A	330.33	330.33	0.00	-	-	-	-	-
A-B	162.95	162.95	0.00	-	-	-	-	-
A-C	164.05	164.05	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	132.12	132.12	0.00	595.04	0.222	0.28	7.776	A
B-A	115.61	115.59	0.00	423.19	0.273	0.37	11.703	B
C-AB	38.86	38.86	0.00	849.88	0.046	0.07	4.439	A
C-A	330.31	330.31	0.00	-	-	-	-	-
A-B	162.95	162.95	0.00	-	-	-	-	-
A-C	164.05	164.05	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	107.88	108.16	0.00	621.45	0.174	0.21	7.016	A
B-A	94.39	94.80	0.00	446.75	0.211	0.27	10.242	B
C-AB	29.17	29.25	0.00	825.08	0.035	0.05	4.524	A
C-A	272.25	272.25	0.00	-	-	-	-	-
A-B	133.05	133.05	0.00	-	-	-	-	-
A-C	133.95	133.95	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	90.34	90.53	0.00	638.65	0.141	0.17	6.569	A
B-A	79.05	79.30	0.00	463.04	0.171	0.21	9.387	A
C-AB	22.96	23.01	0.00	807.18	0.028	0.04	4.591	A
C-A	229.47	229.47	0.00	-	-	-	-	-
A-B	111.42	111.42	0.00	-	-	-	-	-
A-C	112.18	112.18	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, PM	2023 Base + Dev	PM		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Star-Crossroads	T-Junction	Two-way	A,B,C	8.05	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	NCR 8		Minor
C	C	A5W		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.30		0.00		2.20	250.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	6.10	4.30	3.60	2.70	✓	1.00	19	25

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	510.840	0.088	0.222	0.140	0.317
1	B-C	705.050	0.102	0.258	-	-
1	C-B	718.741	0.263	0.263	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	390.00	100.000
B	ONE HOUR	✓	172.00	100.000
C	ONE HOUR	✓	217.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	184.000	206.000
	B	45.000	0.000	127.000
	C	203.000	14.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.47	0.53
	B	0.26	0.00	0.74
	C	0.94	0.06	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.23	7.74	0.30	A
B-A	0.12	10.21	0.14	B
C-AB	0.03	4.96	0.04	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	95.61	94.91	0.00	637.90	0.150	0.17	6.622	A
B-A	33.88	33.55	0.00	438.25	0.077	0.08	8.888	A
C-AB	13.18	13.09	0.00	739.31	0.018	0.02	4.957	A
C-A	150.19	150.19	0.00	-	-	-	-	-
A-B	138.52	138.52	0.00	-	-	-	-	-
A-C	155.09	155.09	0.00	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	114.17	113.98	0.00	624.13	0.183	0.22	7.055	A
B-A	40.45	40.37	0.00	423.38	0.096	0.10	9.397	A
C-AB	16.49	16.47	0.00	744.50	0.022	0.03	4.944	A
C-A	178.59	178.59	0.00	-	-	-	-	-
A-B	165.41	165.41	0.00	-	-	-	-	-
A-C	185.19	185.19	0.00	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	139.83	139.53	0.00	604.74	0.231	0.30	7.734	A
B-A	49.55	49.41	0.00	402.02	0.123	0.14	10.201	B
C-AB	21.54	21.50	0.00	752.21	0.029	0.04	4.926	A
C-A	217.38	217.38	0.00	-	-	-	-	-
A-B	202.59	202.59	0.00	-	-	-	-	-
A-C	226.81	226.81	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	139.83	139.82	0.00	604.67	0.231	0.30	7.744	A
B-A	49.55	49.54	0.00	402.00	0.123	0.14	10.213	B
C-AB	21.55	21.55	0.00	752.22	0.029	0.04	4.928	A
C-A	217.37	217.37	0.00	-	-	-	-	-
A-B	202.59	202.59	0.00	-	-	-	-	-
A-C	226.81	226.81	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	114.17	114.46	0.00	624.01	0.183	0.23	7.071	A
B-A	40.45	40.59	0.00	423.36	0.096	0.11	9.407	A
C-AB	16.50	16.54	0.00	744.52	0.022	0.03	4.945	A
C-A	178.58	178.58	0.00	-	-	-	-	-
A-B	165.41	165.41	0.00	-	-	-	-	-
A-C	185.19	185.19	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	95.61	95.80	0.00	637.68	0.150	0.18	6.645	A
B-A	33.88	33.97	0.00	438.26	0.077	0.08	8.907	A
C-AB	13.20	13.22	0.00	739.32	0.018	0.02	4.957	A
C-A	150.17	150.17	0.00	-	-	-	-	-
A-B	138.52	138.52	0.00	-	-	-	-	-
A-C	155.09	155.09	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev + seasonality, PM Aug

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev + seasonality, PM Aug	2023 Base + Dev + seasonality	PM Aug		ONE HOUR	16:15	17:45	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Star-Crossroads	T-Junction	Two-way	A,B,C	8.56	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	NCR 8		Minor
C	C	A5W		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.30		0.00		2.20	250.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	6.10	4.30	3.60	2.70	✓	1.00	19	25

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	517.817	0.089	0.225	0.141	0.321
1	B-C	742.882	0.107	0.272	-	-
1	C-B	718.741	0.263	0.263	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	488.00	100.000
B	ONE HOUR	✓	195.00	100.000
C	ONE HOUR	✓	291.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	212.000	276.000
	B	60.000	0.000	135.000
	C	272.000	19.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.43	0.57
	B	0.31	0.00	0.69
	C	0.93	0.07	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.25	7.93	0.33	A
B-A	0.18	11.69	0.21	B
C-AB	0.04	4.90	0.06	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	101.64	100.90	0.00	650.33	0.156	0.18	6.544	A
B-A	45.17	44.70	0.00	421.76	0.107	0.12	9.536	A
C-AB	19.32	19.19	0.00	754.67	0.026	0.03	4.895	A
C-A	199.76	199.76	0.00	-	-	-	-	-
A-B	159.60	159.60	0.00	-	-	-	-	-
A-C	207.79	207.79	0.00	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	121.36	121.15	0.00	630.79	0.192	0.24	7.060	A
B-A	53.94	53.80	0.00	402.17	0.134	0.15	10.329	B
C-AB	24.58	24.54	0.00	763.45	0.032	0.04	4.871	A
C-A	237.02	237.02	0.00	-	-	-	-	-
A-B	190.58	190.58	0.00	-	-	-	-	-
A-C	248.12	248.12	0.00	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	148.64	148.29	0.00	602.77	0.247	0.32	7.909	A
B-A	66.06	65.83	0.00	374.06	0.177	0.21	11.679	B
C-AB	32.86	32.79	0.00	776.28	0.042	0.06	4.842	A
C-A	287.54	287.54	0.00	-	-	-	-	-
A-B	233.42	233.42	0.00	-	-	-	-	-
A-C	303.88	303.88	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	148.64	148.63	0.00	602.59	0.247	0.33	7.930	A
B-A	66.06	66.05	0.00	374.03	0.177	0.21	11.688	B
C-AB	32.88	32.88	0.00	776.30	0.042	0.06	4.844	A
C-A	287.52	287.52	0.00	-	-	-	-	-
A-B	233.42	233.42	0.00	-	-	-	-	-
A-C	303.88	303.88	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	121.36	121.70	0.00	630.51	0.192	0.24	7.079	A
B-A	53.94	54.16	0.00	402.16	0.134	0.16	10.353	B
C-AB	24.61	24.68	0.00	763.48	0.032	0.04	4.873	A
C-A	236.99	236.99	0.00	-	-	-	-	-
A-B	190.58	190.58	0.00	-	-	-	-	-
A-C	248.12	248.12	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	101.64	101.85	0.00	649.89	0.156	0.19	6.573	A
B-A	45.17	45.31	0.00	421.78	0.107	0.12	9.567	A
C-AB	19.37	19.41	0.00	754.70	0.026	0.03	4.896	A
C-A	199.71	199.71	0.00	-	-	-	-	-
A-B	159.60	159.60	0.00	-	-	-	-	-
A-C	207.79	207.79	0.00	-	-	-	-	-

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: STAR_OVERBRIDGE_A5_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\Star Crossroad\Overbridge
Report generation date: 14/06/2018 12:23:38

» (Default Analysis Set) - 2017 Base, AM
» (Default Analysis Set) - 2017 Base, PM
» (Default Analysis Set) - 2023 Base, AM
» (Default Analysis Set) - 2023 Base, PM
» (Default Analysis Set) - 2023 Base + Dev, AM
» (Default Analysis Set) - 2023 Base + Dev, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2017 Base								
Stream B-C	0.05	6.22	0.05	A	0.03	5.71	0.03	A
Stream B-A	0.05	9.45	0.05	A	0.04	8.63	0.04	A
Stream C-AB	0.02	5.98	0.02	A	0.06	5.67	0.05	A
Stream C-A	-	-	-	-	-	-	-	-
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
A1 - 2023 Base								
Stream B-C	0.06	6.28	0.05	A	0.04	5.74	0.03	A
Stream B-A	0.05	9.61	0.05	A	0.04	8.77	0.04	A
Stream C-AB	0.02	6.02	0.02	A	0.06	5.70	0.06	A
Stream C-A	-	-	-	-	-	-	-	-
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
A1 - 2023 Base + Dev								
Stream B-C	0.06	7.28	0.06	A	0.04	6.56	0.04	A
Stream B-A	0.20	10.89	0.17	B	0.18	9.94	0.15	A
Stream C-AB	0.11	6.44	0.10	A	0.15	6.07	0.13	A
Stream C-A	-	-	-	-	-	-	-	-
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 08:00 - 09:30
"D2 - 2017 Base, PM" model duration: 08:00 - 09:30
"D3 - 2023 Base, AM" model duration: 08:00 - 09:30
"D4 - 2023 Base, PM" model duration: 08:00 - 09:30
"D5 - 2023 Base + Dev, AM" model duration: 08:00 - 09:30
"D6 - 2023 Base + Dev, PM" model duration: 08:00 - 09:30

Run using Junctions 8.0.6.541 at 14/06/2018 12:23:33

File summary

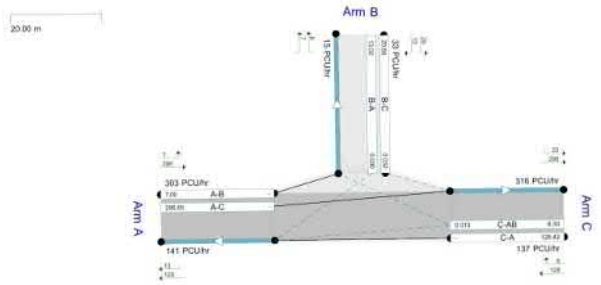
Title	(untitled)
Location	
Site Number	
Date	17/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, AM	2017 Base	AM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	7.17	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5W		Major
B	B	Star		Minor
C	C	A5E		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	9.10		0.00		2.20	250.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	7.80	4.50	2.90	2.60	✓	1.00	31	36

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	518.082	0.082	0.206	0.130	0.295
1	B-C	722.397	0.096	0.242	-	-
1	C-B	718.741	0.241	0.241	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	402.00	100.000
B	ONE HOUR	✓	44.60	100.000
C	ONE HOUR	✓	181.60	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	9.300	392.700
	B	17.300	0.000	27.300
	C	170.600	11.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.02	0.98
	B	0.39	0.00	0.61
	C	0.94	0.06	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.05	6.22	0.05	A
B-A	0.05	9.45	0.05	A
C-AB	0.02	5.98	0.02	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	20.55	20.42	0.00	645.28	0.032	0.03	5.759	A
B-A	13.02	12.90	0.00	437.38	0.030	0.03	8.479	A
C-AB	8.30	8.25	0.00	646.88	0.013	0.01	5.636	A
C-A	128.42	128.42	0.00	-	-	-	-	-
A-B	7.00	7.00	0.00	-	-	-	-	-
A-C	295.65	295.65	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	24.54	24.51	0.00	630.03	0.039	0.04	5.944	A
B-A	15.55	15.52	0.00	421.79	0.037	0.04	8.861	A
C-AB	9.93	9.91	0.00	633.23	0.016	0.02	5.775	A
C-A	153.33	153.33	0.00	-	-	-	-	-
A-B	8.36	8.36	0.00	-	-	-	-	-
A-C	353.03	353.03	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	30.06	30.01	0.00	609.11	0.049	0.05	6.216	A
B-A	19.05	19.00	0.00	400.10	0.048	0.05	9.445	A
C-AB	12.18	12.17	0.00	614.55	0.020	0.02	5.975	A
C-A	187.76	187.76	0.00	-	-	-	-	-
A-B	10.24	10.24	0.00	-	-	-	-	-
A-C	432.37	432.37	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	30.06	30.06	0.00	609.04	0.049	0.05	6.217	A
B-A	19.05	19.05	0.00	400.13	0.048	0.05	9.446	A
C-AB	12.18	12.18	0.00	614.55	0.020	0.02	5.975	A
C-A	187.76	187.76	0.00	-	-	-	-	-
A-B	10.24	10.24	0.00	-	-	-	-	-
A-C	432.37	432.37	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	24.54	24.59	0.00	629.90	0.039	0.04	5.949	A
B-A	15.55	15.60	0.00	421.85	0.037	0.04	8.862	A
C-AB	9.93	9.94	0.00	633.23	0.016	0.02	5.775	A
C-A	153.33	153.33	0.00	-	-	-	-	-
A-B	8.36	8.36	0.00	-	-	-	-	-
A-C	353.03	353.03	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	20.55	20.58	0.00	645.00	0.032	0.03	5.767	A
B-A	13.02	13.06	0.00	437.52	0.030	0.03	8.483	A
C-AB	8.30	8.31	0.00	646.88	0.013	0.01	5.639	A
C-A	128.42	128.42	0.00	-	-	-	-	-
A-B	7.00	7.00	0.00	-	-	-	-	-
A-C	295.65	295.65	0.00	-	-	-	-	-

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, PM	2017 Base	PM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	6.34	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5W		Major
B	B	Star		Minor
C	C	A5E		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	9.10		0.00		2.20	250.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	7.80	4.50	2.90	2.60	✓	1.00	31	36

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	527.750	0.083	0.210	0.132	0.300
1	B-C	710.026	0.094	0.238	-	-
1	C-B	718.741	0.241	0.241	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	217.20	100.000
B	ONE HOUR	✓	33.60	100.000
C	ONE HOUR	✓	292.20	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	27.300	189.900
	B	14.600	0.000	19.000
	C	261.200	31.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.13	0.87
	B	0.43	0.00	0.57
	C	0.89	0.11	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.03	5.71	0.03	A
B-A	0.04	8.63	0.04	A
C-AB	0.05	5.67	0.06	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	14.30	14.22	0.00	670.05	0.021	0.02	5.489	A
B-A	10.99	10.90	0.00	462.97	0.024	0.02	7.961	A
C-AB	23.57	23.43	0.00	683.54	0.034	0.04	5.452	A
C-A	196.41	196.41	0.00	-	-	-	-	-
A-B	20.55	20.55	0.00	-	-	-	-	-
A-C	142.97	142.97	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	17.08	17.06	0.00	662.04	0.026	0.03	5.581	A
B-A	13.13	13.10	0.00	450.45	0.029	0.03	8.231	A
C-AB	28.27	28.24	0.00	677.77	0.042	0.04	5.542	A
C-A	234.41	234.41	0.00	-	-	-	-	-
A-B	24.54	24.54	0.00	-	-	-	-	-
A-C	170.72	170.72	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	20.92	20.89	0.00	651.11	0.032	0.03	5.711	A
B-A	16.07	16.04	0.00	433.05	0.037	0.04	8.633	A
C-AB	34.90	34.85	0.00	670.44	0.052	0.06	5.663	A
C-A	286.82	286.82	0.00	-	-	-	-	-
A-B	30.06	30.06	0.00	-	-	-	-	-
A-C	209.08	209.08	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	20.92	20.92	0.00	651.05	0.032	0.03	5.712	A
B-A	16.07	16.07	0.00	433.07	0.037	0.04	8.632	A
C-AB	34.90	34.90	0.00	670.44	0.052	0.06	5.666	A
C-A	286.82	286.82	0.00	-	-	-	-	-
A-B	30.06	30.06	0.00	-	-	-	-	-
A-C	209.08	209.08	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	17.08	17.11	0.00	661.91	0.026	0.03	5.584	A
B-A	13.13	13.16	0.00	450.50	0.029	0.03	8.233	A
C-AB	28.27	28.32	0.00	677.77	0.042	0.04	5.542	A
C-A	234.41	234.41	0.00	-	-	-	-	-
A-B	24.54	24.54	0.00	-	-	-	-	-
A-C	170.72	170.72	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	14.30	14.32	0.00	669.79	0.021	0.02	5.491	A
B-A	10.99	11.01	0.00	463.08	0.024	0.02	7.963	A
C-AB	23.57	23.60	0.00	683.54	0.034	0.04	5.454	A
C-A	196.41	196.41	0.00	-	-	-	-	-
A-B	20.55	20.55	0.00	-	-	-	-	-
A-C	142.97	142.97	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, AM	2023 Base	AM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	7.26	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5W		Major
B	B	Star		Minor
C	C	A5E		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	9.10		0.00		2.20	250.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	7.80	4.50	2.90	2.60	✓	1.00	31	36

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	517.063	0.081	0.206	0.130	0.294
1	B-C	723.701	0.096	0.243	-	-
1	C-B	718.741	0.241	0.241	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	419.00	100.000
B	ONE HOUR	✓	47.00	100.000
C	ONE HOUR	✓	189.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	10.000	409.000
	B	18.000	0.000	29.000
	C	178.000	11.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.02	0.98
	B	0.38	0.00	0.62
	C	0.94	0.06	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.05	6.28	0.06	A
B-A	0.05	9.61	0.05	A
C-AB	0.02	6.02	0.02	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	21.83	21.69	0.00	643.19	0.034	0.03	5.790	A
B-A	13.55	13.42	0.00	433.22	0.031	0.03	8.572	A
C-AB	8.30	8.25	0.00	643.85	0.013	0.01	5.663	A
C-A	133.99	133.99	0.00	-	-	-	-	-
A-B	7.53	7.53	0.00	-	-	-	-	-
A-C	307.92	307.92	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	26.07	26.04	0.00	627.27	0.042	0.04	5.987	A
B-A	16.18	16.15	0.00	417.02	0.039	0.04	8.980	A
C-AB	9.93	9.92	0.00	629.63	0.016	0.02	5.808	A
C-A	159.98	159.98	0.00	-	-	-	-	-
A-B	8.99	8.99	0.00	-	-	-	-	-
A-C	367.68	367.68	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	31.93	31.88	0.00	605.41	0.053	0.06	6.276	A
B-A	19.82	19.77	0.00	394.49	0.050	0.05	9.606	A
C-AB	12.19	12.17	0.00	610.18	0.020	0.02	6.019	A
C-A	195.90	195.90	0.00	-	-	-	-	-
A-B	11.01	11.01	0.00	-	-	-	-	-
A-C	450.32	450.32	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	31.93	31.93	0.00	605.34	0.053	0.06	6.277	A
B-A	19.82	19.82	0.00	394.52	0.050	0.05	9.607	A
C-AB	12.19	12.19	0.00	610.18	0.020	0.02	6.019	A
C-A	195.90	195.90	0.00	-	-	-	-	-
A-B	11.01	11.01	0.00	-	-	-	-	-
A-C	450.32	450.32	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	26.07	26.12	0.00	627.13	0.042	0.04	5.989	A
B-A	16.18	16.23	0.00	417.09	0.039	0.04	8.981	A
C-AB	9.93	9.95	0.00	629.63	0.016	0.02	5.811	A
C-A	159.98	159.98	0.00	-	-	-	-	-
A-B	8.99	8.99	0.00	-	-	-	-	-
A-C	367.68	367.68	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	21.83	21.87	0.00	642.91	0.034	0.04	5.796	A
B-A	13.55	13.58	0.00	433.37	0.031	0.03	8.577	A
C-AB	8.30	8.32	0.00	643.85	0.013	0.01	5.666	A
C-A	133.99	133.99	0.00	-	-	-	-	-
A-B	7.53	7.53	0.00	-	-	-	-	-
A-C	307.92	307.92	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, PM	2023 Base	PM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	6.39	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5W		Major
B	B	Star		Minor
C	C	A5E		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	9.10		0.00		2.20	250.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	7.80	4.50	2.90	2.60	✓	1.00	31	36

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	527.189	0.083	0.210	0.132	0.300
1	B-C	710.744	0.094	0.238	-	-
1	C-B	718.741	0.241	0.241	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	229.00	100.000
B	ONE HOUR	✓	35.20	100.000
C	ONE HOUR	✓	309.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	29.000	200.000
	B	15.200	0.000	20.000
	C	276.000	33.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.13	0.87
	B	0.43	0.00	0.57
	C	0.89	0.11	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.03	5.74	0.04	A
B-A	0.04	8.77	0.04	A
C-AB	0.06	5.70	0.06	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	15.06	14.97	0.00	668.61	0.023	0.02	5.507	A
B-A	11.44	11.34	0.00	458.85	0.025	0.03	8.042	A
C-AB	25.12	24.97	0.00	681.94	0.037	0.04	5.478	A
C-A	207.51	207.51	0.00	-	-	-	-	-
A-B	21.83	21.83	0.00	-	-	-	-	-
A-C	150.57	150.57	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	17.98	17.96	0.00	660.15	0.027	0.03	5.605	A
B-A	13.66	13.64	0.00	445.64	0.031	0.03	8.333	A
C-AB	30.15	30.12	0.00	676.01	0.045	0.05	5.573	A
C-A	247.63	247.63	0.00	-	-	-	-	-
A-B	26.07	26.07	0.00	-	-	-	-	-
A-C	179.80	179.80	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	22.02	21.99	0.00	648.62	0.034	0.03	5.744	A
B-A	16.74	16.70	0.00	427.28	0.039	0.04	8.768	A
C-AB	37.26	37.21	0.00	668.54	0.056	0.06	5.702	A
C-A	302.96	302.96	0.00	-	-	-	-	-
A-B	31.93	31.93	0.00	-	-	-	-	-
A-C	220.20	220.20	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	22.02	22.02	0.00	648.56	0.034	0.04	5.745	A
B-A	16.74	16.73	0.00	427.30	0.039	0.04	8.767	A
C-AB	37.26	37.26	0.00	668.54	0.056	0.06	5.704	A
C-A	302.96	302.96	0.00	-	-	-	-	-
A-B	31.93	31.93	0.00	-	-	-	-	-
A-C	220.20	220.20	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	17.98	18.01	0.00	660.03	0.027	0.03	5.609	A
B-A	13.66	13.70	0.00	445.69	0.031	0.03	8.333	A
C-AB	30.15	30.20	0.00	676.01	0.045	0.05	5.574	A
C-A	247.63	247.63	0.00	-	-	-	-	-
A-B	26.07	26.07	0.00	-	-	-	-	-
A-C	179.80	179.80	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	15.06	15.08	0.00	668.34	0.023	0.02	5.512	A
B-A	11.44	11.47	0.00	458.96	0.025	0.03	8.046	A
C-AB	25.12	25.16	0.00	681.94	0.037	0.04	5.483	A
C-A	207.51	207.51	0.00	-	-	-	-	-
A-B	21.83	21.83	0.00	-	-	-	-	-
A-C	150.57	150.57	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, AM	2023 Base + Dev	AM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	8.48	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5W		Major
B	B	Star		Minor
C	C	A5E		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	9.10		0.00		2.20	250.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	7.80	4.50	2.90	2.60	✓	1.00	31	36

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	540.988	0.085	0.215	0.136	0.308
1	B-C	651.677	0.086	0.218	-	-
1	C-B	718.741	0.241	0.241	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	419.00	100.000
B	ONE HOUR	✓	90.00	100.000
C	ONE HOUR	✓	232.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	10.000	409.000
	B	61.000	0.000	29.000
	C	178.000	54.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.02	0.98
	B	0.68	0.00	0.32
	C	0.77	0.23	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.06	7.28	0.06	A
B-A	0.17	10.89	0.20	B
C-AB	0.10	6.44	0.11	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	21.83	21.67	0.00	568.09	0.038	0.04	6.586	A
B-A	45.92	45.47	0.00	443.26	0.104	0.11	9.040	A
C-AB	41.19	40.92	0.00	648.17	0.064	0.07	5.925	A
C-A	133.47	133.47	0.00	-	-	-	-	-
A-B	7.53	7.53	0.00	-	-	-	-	-
A-C	307.92	307.92	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	26.07	26.03	0.00	550.88	0.047	0.05	6.858	A
B-A	54.84	54.71	0.00	424.19	0.129	0.15	9.740	A
C-AB	49.50	49.43	0.00	635.99	0.078	0.08	6.137	A
C-A	159.06	159.06	0.00	-	-	-	-	-
A-B	8.99	8.99	0.00	-	-	-	-	-
A-C	367.68	367.68	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	31.93	31.87	0.00	526.51	0.061	0.06	7.277	A
B-A	67.16	66.95	0.00	397.85	0.169	0.20	10.873	B
C-AB	61.33	61.23	0.00	620.17	0.099	0.11	6.441	A
C-A	194.11	194.11	0.00	-	-	-	-	-
A-B	11.01	11.01	0.00	-	-	-	-	-
A-C	450.32	450.32	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	31.93	31.93	0.00	526.39	0.061	0.06	7.279	A
B-A	67.16	67.16	0.00	397.83	0.169	0.20	10.886	B
C-AB	61.33	61.33	0.00	620.17	0.099	0.11	6.443	A
C-A	194.11	194.11	0.00	-	-	-	-	-
A-B	11.01	11.01	0.00	-	-	-	-	-
A-C	450.32	450.32	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	26.07	26.13	0.00	550.69	0.047	0.05	6.862	A
B-A	54.84	55.04	0.00	424.16	0.129	0.15	9.760	A
C-AB	49.50	49.60	0.00	635.99	0.078	0.09	6.139	A
C-A	159.06	159.06	0.00	-	-	-	-	-
A-B	8.99	8.99	0.00	-	-	-	-	-
A-C	367.68	367.68	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	21.83	21.87	0.00	567.79	0.038	0.04	6.596	A
B-A	45.92	46.06	0.00	443.19	0.104	0.12	9.069	A
C-AB	41.19	41.26	0.00	648.17	0.064	0.07	5.934	A
C-A	133.47	133.47	0.00	-	-	-	-	-
A-B	7.53	7.53	0.00	-	-	-	-	-
A-C	307.92	307.92	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, PM	2023 Base + Dev	PM		ONE HOUR	08:00	09:30	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C	7.56	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5W		Major
B	B	Star		Minor
C	C	A5E		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	9.10		0.00		2.20	250.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	7.80	4.50	2.90	2.60	✓	1.00	31	36

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	543.983	0.086	0.217	0.136	0.310
1	B-C	645.290	0.086	0.216	-	-
1	C-B	718.741	0.241	0.241	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	229.00	100.000
B	ONE HOUR	✓	78.00	100.000
C	ONE HOUR	✓	352.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	29.000	200.000
	B	58.000	0.000	20.000
	C	276.000	76.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.13	0.87
	B	0.74	0.00	0.26
	C	0.78	0.22	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.04	6.56	0.04	A
B-A	0.15	9.94	0.18	A
C-AB	0.13	6.07	0.15	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	15.06	14.95	0.00	596.03	0.025	0.03	6.195	A
B-A	43.67	43.25	0.00	463.43	0.094	0.10	8.561	A
C-AB	58.70	58.32	0.00	688.05	0.085	0.09	5.715	A
C-A	206.30	206.30	0.00	-	-	-	-	-
A-B	21.83	21.83	0.00	-	-	-	-	-
A-C	150.57	150.57	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	17.98	17.96	0.00	585.57	0.031	0.03	6.341	A
B-A	52.14	52.03	0.00	447.68	0.116	0.13	9.097	A
C-AB	70.91	70.82	0.00	684.84	0.104	0.12	5.863	A
C-A	245.53	245.53	0.00	-	-	-	-	-
A-B	26.07	26.07	0.00	-	-	-	-	-
A-C	179.80	179.80	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	22.02	21.99	0.00	570.67	0.039	0.04	6.560	A
B-A	63.86	63.68	0.00	426.01	0.150	0.17	9.930	A
C-AB	88.59	88.45	0.00	682.00	0.130	0.15	6.063	A
C-A	298.97	298.97	0.00	-	-	-	-	-
A-B	31.93	31.93	0.00	-	-	-	-	-
A-C	220.20	220.20	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	22.02	22.02	0.00	570.58	0.039	0.04	6.561	A
B-A	63.86	63.85	0.00	425.97	0.150	0.18	9.941	A
C-AB	88.59	88.59	0.00	682.00	0.130	0.15	6.066	A
C-A	298.97	298.97	0.00	-	-	-	-	-
A-B	31.93	31.93	0.00	-	-	-	-	-
A-C	220.20	220.20	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	17.98	18.01	0.00	585.42	0.031	0.03	6.346	A
B-A	52.14	52.31	0.00	447.63	0.116	0.13	9.110	A
C-AB	70.91	71.05	0.00	684.84	0.104	0.12	5.868	A
C-A	245.53	245.53	0.00	-	-	-	-	-
A-B	26.07	26.07	0.00	-	-	-	-	-
A-C	179.80	179.80	0.00	-	-	-	-	-

Main results: (09:15-09:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	15.06	15.08	0.00	595.77	0.025	0.03	6.201	A
B-A	43.67	43.78	0.00	463.32	0.094	0.11	8.582	A
C-AB	58.70	58.79	0.00	688.05	0.085	0.10	5.721	A
C-A	206.30	206.30	0.00	-	-	-	-	-
A-B	21.83	21.83	0.00	-	-	-	-	-
A-C	150.57	150.57	0.00	-	-	-	-	-

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A55J7A_PONTRONWY_FINAL_ADVANCED.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A55 J7A
Report generation date: 14/06/2018 13:58:31

- » (Default Analysis Set) - 2017 Base, AM
- » (Default Analysis Set) - 2017 Base, PM
- » (Default Analysis Set) - 2023 Base, AM
- » (Default Analysis Set) - 2023 Base, PM
- » (Default Analysis Set) - 2023 Base + Dev, AM
- » (Default Analysis Set) - 2023 Base + Dev, PM
- » (Default Analysis Set) - 2023 Base + Dev + Seasonality, AM Aug
- » (Default Analysis Set) - 2023 Base + Dev + Seasonality, PM Aug

Summary of junction performance

	AM				AM Aug				PM				PM Aug			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	L
	A1 - 2017 Base															
Stream B-C	0.02	5.24	0.02	A					0.02	5.65	0.02	A				
Stream B-AD	0.01	8.88	0.01	A					0.02	8.60	0.02	A				
Stream A-B	-	-	-	-					-	-	-	-				
Stream A-C	-	-	-	-					-	-	-	-				
Stream A-D	0.00	0.00	0.00	A					0.00	0.00	0.00	A				
Stream D-A	0.02	5.79	0.02	A					0.02	5.28	0.02	A				
Stream D-BC	0.11	8.65	0.10	A					0.14	8.07	0.12	A				
Stream C-ABD	0.02	5.89	0.02	A					0.02	6.21	0.02	A				
Stream C-D	-	-	-	-					-	-	-	-				
Stream C-A	-	-	-	-					-	-	-	-				
	A1 - 2023 Base															
Stream B-C	0.02	5.26	0.02	A					0.03	5.68	0.03	A				
Stream B-AD	0.01	9.04	0.01	A					0.02	8.75	0.02	A				
Stream A-B	-	-	-	-					-	-	-	-				
Stream A-C	-	-	-	-					-	-	-	-				
Stream A-D	0.00	0.00	0.00	A					0.00	0.00	0.00	A				
Stream D-A	0.02	5.89	0.02	A					0.02	5.33	0.02	A				
Stream D-BC	0.12	8.88	0.10	A					0.15	8.23	0.13	A				
Stream C-ABD	0.02	5.91	0.02	A					0.02	6.26	0.02	A				
Stream C-D	-	-	-	-					-	-	-	-				
Stream C-A	-	-	-	-					-	-	-	-				
	A1 - 2023 Base + Dev															
Stream B-C	0.23	6.45	0.19	A					0.24	6.90	0.20	A				
Stream B-AD	0.01	9.70	0.01	A					0.02	9.59	0.02	A				

Stream A-B	-	-	-	-					-	-	-	-				
Stream A-C	-	-	-	-					-	-	-	-				
Stream A-D	0.00	0.00	0.00	A					0.00	0.00	0.00	A				
Stream D-A	0.02	6.19	0.02	A					0.03	5.57	0.02	A				
Stream D-BC	0.40	11.19	0.29	B					0.41	10.18	0.29	B				
Stream C-ABD	0.07	6.28	0.07	A					0.08	6.74	0.07	A				
Stream C-D	-	-	-	-					-	-	-	-				
Stream C-A	-	-	-	-					-	-	-	-				
	A1 - 2023 Base + Dev + Seasonality															
Stream B-C					0.25	6.72	0.20	A					0.27	7.42	0.22	
Stream B-AD					0.02	10.82	0.02	B					0.04	10.61	0.03	
Stream A-B					-	-	-	-					-	-	-	
Stream A-C					-	-	-	-					-	-	-	
Stream A-D					0.00	0.00	0.00	A					0.00	0.00	0.00	
Stream D-A					0.04	6.91	0.03	A					0.04	5.93	0.04	
Stream D-BC					0.57	14.14	0.37	B					0.56	12.10	0.36	
Stream C-ABD					0.09	6.38	0.08	A					0.09	7.05	0.08	
Stream C-D					-	-	-	-					-	-	-	
Stream C-A					-	-	-	-					-	-	-	

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:15 - 17:45
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:15 - 17:45
"D7 - 2023 Base + Dev + Seasonality, AM Aug" model duration: 07:45 - 09:15
"D8 - 2023 Base + Dev + Seasonality, PM Aug" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 13:58:17

File summary

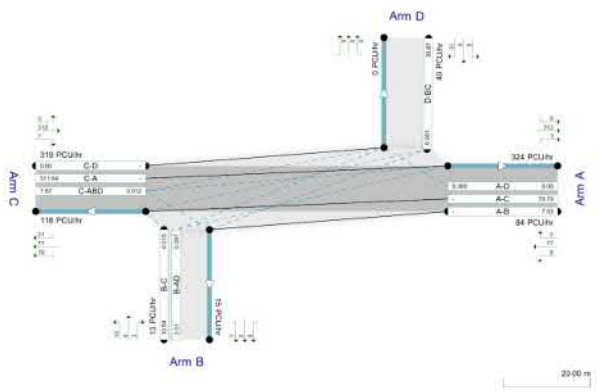
Title	(untitled)
Location	
Site Number	
Date	14/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base, AM	2017 Base	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	J7A A55	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		7.31	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	PONT RONWY		Minor
C	C	A5W		Major
D	D	A55J7A		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.25		0.00		2.20	0.00		
C	7.25		0.00		2.20	145.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.90	5.29	4.38	3.81	✓	2.00	20	24
D	Two lanes		4.90	4.70								34	53

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	573.963	-	-	-	0.210	0.210	0.210	-	0.210	-	-
1	B-AD	513.676	0.088	0.224	-	-	-	0.141	0.319	0.141	0.088	0.224
1	B-C	748.118	0.108	0.274	-	-	-	-	-	-	0.108	0.274
1	C-B	657.934	0.241	0.241	-	-	-	-	-	-	0.241	0.241
1	D-A	782.335	-	-	-	0.287	0.113	0.287	-	0.113	-	-
1	D-BC	602.290	0.165	0.165	0.375	0.262	0.104	0.262	-	0.104	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	112.00	100.000
B	ONE HOUR	✓	18.00	100.000
C	ONE HOUR	✓	424.00	100.000
D	ONE HOUR	✓	53.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	**A**	84.32	84.32		
07:45-08:00	**B**	13.55	13.55		
07:45-08:00	**C**	319.21	319.21		
07:45-08:00	**D**	39.90	39.90		
08:00-08:15	**A**	100.69	100.69		
08:00-08:15	**B**	16.18	16.18		
08:00-08:15	**C**	381.17	381.17		
08:00-08:15	**D**	47.65	47.65		
08:15-08:30	**A**	123.31	123.31		
08:15-08:30	**B**	19.82	19.82		
08:15-08:30	**C**	466.83	466.83		
08:15-08:30	**D**	58.35	58.35		
08:30-08:45	**A**	123.31	123.31		
08:30-08:45	**B**	19.82	19.82		
08:30-08:45	**C**	466.83	466.83		
08:30-08:45	**D**	58.35	58.35		
08:45-09:00	**A**	100.69	100.69		
08:45-09:00	**B**	16.18	16.18		
08:45-09:00	**C**	381.17	381.17		
08:45-09:00	**D**	47.65	47.65		
09:00-09:15	**A**	84.32	84.32		
09:00-09:15	**B**	13.55	13.55		
09:00-09:15	**C**	319.21	319.21		
09:00-09:15	**D**	39.90	39.90		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	**B**	**C**	**D**
From	**A**	0.000	10.000	102.000	0.000
	B	4.000	0.000	14.000	0.000
	C	414.000	10.000	0.000	0.000
	D	12.000	0.000	41.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	**B**	**C**	**D**
From	**A**	0.00	0.09	0.91	0.00
	B	0.22	0.00	0.78	0.00
	C	0.98	0.02	0.00	0.00
	D	0.23	0.00	0.77	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.02	5.24	0.02	~1	A	12.85	19.27	1.65	5.15	0.02	1.65	5.15
B-AD	0.01	8.88	0.01	~1	A	3.67	5.51	0.78	8.48	0.01	0.78	8.48
A-B	-	-	-	-	-	9.18	13.76	-	-	-	-	-
A-C	-	-	-	-	-	93.60	140.40	-	-	-	-	-
A-D	0.00	0.00	0.00	~1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D-A	0.02	5.79	0.02	~1	A	11.01	16.52	1.53	5.55	0.02	1.53	5.55
D-BC	0.10	8.65	0.11	~1	A	37.62	56.43	7.59	8.07	0.08	7.59	8.07
C-ABD	0.02	5.89	0.02	~1	A	9.27	13.90	1.36	5.85	0.02	1.36	5.85
C-D	-	-	-	-	-	0.00	0.00	-	-	-	-	-
C-A	-	-	-	-	-	379.80	569.71	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	10.54	2.63	10.48	0.00	716.57	0.015	0.00	0.01	5.098	A
B-AD	3.01	0.75	2.98	0.00	442.68	0.007	0.00	0.01	8.187	A
A-B	7.53	1.88	7.53	0.00	-	-	-	-	-	-
A-C	76.79	19.20	76.79	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	507.79	0.000	0.00	0.00	0.000	A
D-A	9.03	2.26	8.98	0.00	681.58	0.013	0.00	0.01	5.352	A
D-BC	30.87	7.72	30.61	0.00	505.87	0.061	0.00	0.06	7.572	A
C-ABD	7.57	1.89	7.52	0.00	632.58	0.012	0.00	0.01	5.759	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	311.64	77.91	311.64	0.00	-	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	12.59	3.15	12.57	0.00	710.28	0.018	0.01	0.02	5.159	A
B-AD	3.60	0.90	3.59	0.00	428.86	0.008	0.01	0.01	8.464	A
A-B	8.99	2.25	8.99	0.00	-	-	-	-	-	-
A-C	91.70	22.92	91.70	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	494.94	0.000	0.00	0.00	0.000	A
D-A	10.79	2.70	10.78	0.00	661.77	0.016	0.01	0.02	5.529	A
D-BC	36.86	9.21	36.79	0.00	487.15	0.076	0.06	0.08	7.993	A
C-ABD	9.07	2.27	9.06	0.00	628.20	0.014	0.01	0.01	5.813	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	372.10	93.03	372.10	0.00	-	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	15.41	3.85	15.40	0.00	701.72	0.022	0.02	0.02	5.244	A
B-AD	4.40	1.10	4.39	0.00	409.79	0.011	0.01	0.01	8.879	A
A-B	11.01	2.75	11.01	0.00	-	-	-	-	-	-
A-C	112.30	28.08	112.30	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	477.18	0.000	0.00	0.00	0.000	A
D-A	13.21	3.30	13.19	0.00	634.38	0.021	0.02	0.02	5.794	A
D-BC	45.14	11.29	45.04	0.00	461.27	0.098	0.08	0.11	8.647	A
C-ABD	11.16	2.79	11.14	0.00	622.57	0.018	0.01	0.02	5.887	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	455.68	113.92	455.68	0.00	-	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	12.59	3.15	12.60	0.00	701.67	0.022	0.02	0.02	5.245	A
B-AD	4.40	1.10	4.40	0.00	409.78	0.011	0.01	0.01	8.880	A
A-B	11.01	2.75	11.01	0.00	-	-	-	-	-	-
A-C	112.30	28.08	112.30	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	477.17	0.000	0.00	0.00	0.000	A
D-A	13.21	3.30	13.21	0.00	634.34	0.021	0.02	0.02	5.795	A
D-BC	45.14	11.29	45.14	0.00	461.27	0.098	0.11	0.11	8.650	A
C-ABD	11.16	2.79	11.16	0.00	622.54	0.018	0.02	0.02	5.889	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	455.68	113.92	455.68	0.00	-	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	12.59	3.15	12.60	0.00	710.19	0.018	0.02	0.02	5.160	A
B-AD	3.60	0.90	3.61	0.00	428.84	0.008	0.01	0.01	8.467	A
A-B	8.99	2.25	8.99	0.00	-	-	-	-	-	-
A-C	91.70	22.92	91.70	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	494.93	0.000	0.00	0.00	0.000	A
D-A	10.79	2.70	10.81	0.00	661.70	0.016	0.02	0.02	5.532	A
D-BC	36.86	9.21	36.96	0.00	487.14	0.076	0.11	0.08	7.998	A
C-ABD	9.07	2.27	9.08	0.00	628.16	0.014	0.02	0.01	5.814	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	372.10	93.03	372.10	0.00	-	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	10.54	2.63	10.55	0.00	716.39	0.015	0.02	0.02	5.099	A
B-AD	3.01	0.75	3.02	0.00	442.65	0.007	0.01	0.01	8.190	A
A-B	7.53	1.88	7.53	0.00	-	-	-	-	-	-
A-C	76.79	19.20	76.79	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	507.78	0.000	0.00	0.00	0.000	A
D-A	9.03	2.26	9.05	0.00	681.45	0.013	0.02	0.01	5.353	A
D-BC	30.87	7.72	30.94	0.00	505.86	0.061	0.08	0.07	7.580	A
C-ABD	7.57	1.89	7.58	0.00	632.50	0.012	0.01	0.01	5.762	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	311.64	77.91	311.64	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.22	0.01	5.098	A	A
B-AD	0.10	0.01	8.187	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.20	0.01	5.352	A	A
D-BC	0.93	0.06	7.572	A	A
C-ABD	0.18	0.01	5.759	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:00-08:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.27	0.02	5.159	A	A
B-AD	0.12	0.01	8.464	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.24	0.02	5.529	A	A
D-BC	1.19	0.08	7.993	A	A
C-ABD	0.22	0.01	5.813	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:15-08:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.33	0.02	5.244	A	A
B-AD	0.16	0.01	8.879	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.31	0.02	5.794	A	A
D-BC	1.57	0.10	8.647	A	A
C-ABD	0.27	0.02	5.887	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:30-08:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.34	0.02	5.245	A	A
B-AD	0.16	0.01	8.880	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.32	0.02	5.795	A	A
D-BC	1.62	0.11	8.650	A	A
C-ABD	0.28	0.02	5.889	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:45-09:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.28	0.02	5.160	A	A
B-AD	0.13	0.01	8.467	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.25	0.02	5.532	A	A
D-BC	1.27	0.08	7.998	A	A
C-ABD	0.22	0.01	5.814	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (09:00-09:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.23	0.02	5.099	A	A
B-AD	0.11	0.01	8.190	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.21	0.01	5.353	A	A
D-BC	1.00	0.07	7.580	A	A
C-ABD	0.18	0.01	5.762	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.06	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.08	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.11	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.11	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.08	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base, PM	2017 Base	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	J7A A55	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		7.20	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	PONT RONWY		Minor
C	C	A5W		Major
D	D	A55J7A		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.25		0.00		2.20	0.00		
C	7.25		0.00		2.20	145.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.90	5.29	4.38	3.81	✓	2.00	20	24
D	Two lanes		4.90	4.70								34	53

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	573.963	-	-	-	0.210	0.210	0.210	-	0.210	-	-
1	B-AD	526.056	0.091	0.229	-	-	-	0.144	0.327	0.144	0.091	0.229
1	B-C	732.164	0.106	0.268	-	-	-	-	-	-	0.106	0.268
1	C-B	657.934	0.241	0.241	-	-	-	-	-	-	0.241	0.241
1	D-A	782.335	-	-	-	0.287	0.113	0.287	-	0.113	-	-
1	D-BC	602.290	0.165	0.165	0.375	0.262	0.104	0.262	-	0.104	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	207.00	100.000
B	ONE HOUR	✓	22.00	100.000
C	ONE HOUR	✓	203.00	100.000
D	ONE HOUR	✓	69.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	A	155.84	155.84		
16:15-16:30	B	16.56	16.56		
16:15-16:30	C	152.83	152.83		
16:15-16:30	D	51.95	51.95		
16:30-16:45	A	186.09	186.09		
16:30-16:45	B	19.78	19.78		
16:30-16:45	C	182.49	182.49		
16:30-16:45	D	62.03	62.03		
16:45-17:00	A	227.91	227.91		
16:45-17:00	B	24.22	24.22		
16:45-17:00	C	223.51	223.51		
16:45-17:00	D	75.97	75.97		
17:00-17:15	A	227.91	227.91		
17:00-17:15	B	24.22	24.22		
17:00-17:15	C	223.51	223.51		
17:00-17:15	D	75.97	75.97		
17:15-17:30	A	186.09	186.09		
17:15-17:30	B	19.78	19.78		
17:15-17:30	C	182.49	182.49		
17:15-17:30	D	62.03	62.03		
17:30-17:45	A	155.84	155.84		
17:30-17:45	B	16.56	16.56		
17:30-17:45	C	152.83	152.83		
17:30-17:45	D	51.95	51.95		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	10.000	197.000	0.000
	B	8.000	0.000	14.000	0.000
	C	193.000	10.000	0.000	0.000
	D	14.000	0.000	55.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.05	0.95	0.00
	B	0.36	0.00	0.64	0.00
	C	0.95	0.05	0.00	0.00
	D	0.20	0.00	0.80	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.02	5.65	0.02	−1	A	12.85	19.27	1.76	5.49	0.02	1.76	5.49
B-AD	0.02	8.60	0.02	−1	A	7.34	11.01	1.51	8.23	0.02	1.51	8.23
A-B	-	-	-	-	-	9.18	13.76	-	-	-	-	-
A-C	-	-	-	-	-	180.77	271.16	-	-	-	-	-
A-D	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D-A	0.02	5.28	0.02	−1	A	12.85	19.27	1.65	5.14	0.02	1.65	5.14
D-BC	0.12	8.07	0.14	−1	A	50.47	75.70	9.61	7.62	0.11	9.61	7.62
C-ABD	0.02	6.21	0.02	−1	A	9.22	13.83	1.41	6.10	0.02	1.41	6.10
C-D	-	-	-	-	-	0.00	0.00	-	-	-	-	-
C-A	-	-	-	-	-	177.06	265.58	-	-	-	-	-

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	10.54	2.63	10.48	0.00	678.24	0.016	0.00	0.02	5.391	A
B-AD	6.02	1.51	5.97	0.00	458.53	0.013	0.00	0.01	7.953	A
A-B	7.53	1.88	7.53	0.00	-	-	-	-	-	-
A-C	148.31	37.08	148.31	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	542.14	0.000	0.00	0.00	0.000	A
D-A	10.54	2.63	10.48	0.00	724.71	0.015	0.00	0.01	5.040	A
D-BC	41.41	10.35	41.08	0.00	536.91	0.077	0.00	0.08	7.255	A
C-ABD	7.55	1.89	7.50	0.00	611.57	0.012	0.00	0.01	5.959	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	145.28	36.32	145.28	0.00	-	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	12.59	3.15	12.57	0.00	667.57	0.019	0.02	0.02	5.495	A
B-AD	7.19	1.80	7.18	0.00	445.37	0.016	0.01	0.02	8.215	A
A-B	8.99	2.25	8.99	0.00	-	-	-	-	-	-
A-C	177.10	44.27	177.10	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	535.95	0.000	0.00	0.00	0.000	A
D-A	12.59	3.15	12.57	0.00	713.19	0.018	0.01	0.02	5.137	A
D-BC	49.44	12.36	49.36	0.00	524.20	0.094	0.08	0.10	7.581	A
C-ABD	9.03	2.26	9.02	0.00	602.80	0.015	0.01	0.02	6.062	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	173.46	43.37	173.46	0.00	-	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	15.41	3.85	15.39	0.00	652.99	0.024	0.02	0.02	5.645	A
B-AD	8.81	2.20	8.79	0.00	427.23	0.021	0.02	0.02	8.603	A
A-B	11.01	2.75	11.01	0.00	-	-	-	-	-	-
A-C	216.90	54.23	216.90	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	527.41	0.000	0.00	0.00	0.000	A
D-A	15.41	3.85	15.40	0.00	697.26	0.022	0.02	0.02	5.279	A
D-BC	60.56	15.14	60.43	0.00	506.65	0.120	0.10	0.13	8.066	A
C-ABD	11.08	2.77	11.07	0.00	590.97	0.019	0.02	0.02	6.207	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	212.42	53.11	212.42	0.00	-	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	15.41	3.85	15.41	0.00	652.93	0.024	0.02	0.02	5.646	A
B-AD	8.81	2.20	8.81	0.00	427.20	0.021	0.02	0.02	8.603	A
A-B	11.01	2.75	11.01	0.00	-	-	-	-	-	-
A-C	216.90	54.23	216.90	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	527.41	0.000	0.00	0.00	0.000	A
D-A	15.41	3.85	15.41	0.00	697.21	0.022	0.02	0.02	5.279	A
D-BC	60.56	15.14	60.55	0.00	506.65	0.120	0.13	0.14	8.069	A
C-ABD	11.08	2.77	11.08	0.00	590.94	0.019	0.02	0.02	6.207	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	212.42	53.11	212.42	0.00	-	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	12.59	3.15	12.60	0.00	667.46	0.019	0.02	0.02	5.496	A
B-AD	7.19	1.80	7.21	0.00	445.34	0.016	0.02	0.02	8.216	A
A-B	8.99	2.25	8.99	0.00	-	-	-	-	-	-
A-C	177.10	44.27	177.10	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	535.95	0.000	0.00	0.00	0.000	A
D-A	12.59	3.15	12.60	0.00	713.10	0.018	0.02	0.02	5.140	A
D-BC	49.44	12.36	49.56	0.00	524.19	0.094	0.14	0.11	7.588	A
C-ABD	9.03	2.26	9.04	0.00	602.75	0.015	0.02	0.02	6.065	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	173.46	43.37	173.46	0.00	-	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	10.54	2.63	10.55	0.00	678.01	0.016	0.02	0.02	5.393	A
B-AD	6.02	1.51	6.04	0.00	458.48	0.013	0.02	0.01	7.958	A
A-B	7.53	1.88	7.53	0.00	-	-	-	-	-	-
A-C	148.31	37.08	148.31	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	542.13	0.000	0.00	0.00	0.000	A
D-A	10.54	2.63	10.55	0.00	724.55	0.015	0.02	0.01	5.043	A
D-BC	41.41	10.35	41.49	0.00	536.89	0.077	0.11	0.08	7.270	A
C-ABD	7.55	1.89	7.56	0.00	611.47	0.012	0.02	0.01	5.960	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	145.28	36.32	145.28	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.23	0.02	5.391	A	A
B-AD	0.19	0.01	7.953	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.21	0.01	5.040	A	A
D-BC	1.20	0.08	7.255	A	A
C-ABD	0.19	0.01	5.959	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:30-16:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.28	0.02	5.495	A	A
B-AD	0.24	0.02	8.215	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.26	0.02	5.137	A	A
D-BC	1.52	0.10	7.581	A	A
C-ABD	0.23	0.02	6.062	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:45-17:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.35	0.02	5.645	A	A
B-AD	0.31	0.02	8.603	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.33	0.02	5.279	A	A
D-BC	1.97	0.13	8.066	A	A
C-ABD	0.29	0.02	6.207	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:00-17:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.36	0.02	5.646	A	A
B-AD	0.31	0.02	8.603	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.34	0.02	5.279	A	A
D-BC	2.02	0.13	8.069	A	A
C-ABD	0.29	0.02	6.207	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:15-17:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.29	0.02	5.496	A	A
B-AD	0.25	0.02	8.216	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.28	0.02	5.140	A	A
D-BC	1.61	0.11	7.588	A	A
C-ABD	0.23	0.02	6.065	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:30-17:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.24	0.02	5.393	A	A
B-AD	0.21	0.01	7.958	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.23	0.02	5.043	A	A
D-BC	1.29	0.09	7.270	A	A
C-ABD	0.19	0.01	5.960	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.08	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.10	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.13	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.11	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.08	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base, AM	2023 Base	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	J7A A55	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		7.42	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	PONT RONWY		Minor
C	C	A5W		Major
D	D	A55J7A		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.25		0.00		2.20	0.00		
C	7.25		0.00		2.20	145.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.90	5.29	4.38	3.81	✓	2.00	20	24
D	Two lanes		4.90	4.70								34	53

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	573.963	-	-	-	0.210	0.210	0.210	-	0.210	-	-
1	B-AD	512.652	0.088	0.223	-	-	-	0.140	0.319	0.140	0.088	0.223
1	B-C	749.438	0.109	0.275	-	-	-	-	-	-	0.109	0.275
1	C-B	657.934	0.241	0.241	-	-	-	-	-	-	0.241	0.241
1	D-A	782.335	-	-	-	0.287	0.113	0.287	-	0.113	-	-
1	D-BC	602.290	0.165	0.165	0.375	0.262	0.104	0.262	-	0.104	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	119.00	100.000
B	ONE HOUR	✓	19.00	100.000
C	ONE HOUR	✓	450.00	100.000
D	ONE HOUR	✓	56.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowinPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	89.59	89.59		
07:45-08:00	B	14.30	14.30		
07:45-08:00	C	338.78	338.78		
07:45-08:00	D	42.16	42.16		
08:00-08:15	A	106.98	106.98		
08:00-08:15	B	17.08	17.08		
08:00-08:15	C	404.54	404.54		
08:00-08:15	D	50.34	50.34		
08:15-08:30	A	131.02	131.02		
08:15-08:30	B	20.92	20.92		
08:15-08:30	C	495.46	495.46		
08:15-08:30	D	61.66	61.66		
08:30-08:45	A	131.02	131.02		
08:30-08:45	B	20.92	20.92		
08:30-08:45	C	495.46	495.46		
08:30-08:45	D	61.66	61.66		
08:45-09:00	A	106.98	106.98		
08:45-09:00	B	17.08	17.08		
08:45-09:00	C	404.54	404.54		
08:45-09:00	D	50.34	50.34		
09:00-09:15	A	89.59	89.59		
09:00-09:15	B	14.30	14.30		
09:00-09:15	C	338.78	338.78		
09:00-09:15	D	42.16	42.16		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	11.000	108.000	0.000
	B	4.000	0.000	15.000	0.000
	C	439.000	11.000	0.000	0.000
	D	13.000	0.000	43.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.09	0.91	0.00
	B	0.21	0.00	0.79	0.00
	C	0.98	0.02	0.00	0.00
	D	0.23	0.00	0.77	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.02	5.26	0.02	~1	A	13.76	20.65	1.78	5.16	0.02	1.78	5.16
B-AD	0.01	9.04	0.01	~1	A	3.67	5.51	0.79	8.60	0.01	0.79	8.60
A-B	-	-	-	-	-	10.09	15.14	-	-	-	-	-
A-C	-	-	-	-	-	99.10	148.65	-	-	-	-	-
A-D	0.00	0.00	0.00	~1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D-A	0.02	5.89	0.02	~1	A	11.93	17.89	1.68	5.63	0.02	1.68	5.63
D-BC	0.10	8.88	0.12	~1	A	39.46	59.19	8.12	8.24	0.09	8.13	8.24
C-ABD	0.02	5.91	0.02	~1	A	10.21	15.31	1.50	5.88	0.02	1.50	5.88
C-D	-	-	-	-	-	0.00	0.00	-	-	-	-	-
C-A	-	-	-	-	-	402.72	604.08	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	11.29	2.82	11.23	0.00	716.09	0.016	0.00	0.02	5.107	A
B-AD	3.01	0.75	2.98	0.00	437.51	0.007	0.00	0.01	8.285	A
A-B	8.28	2.07	8.28	0.00	-	-	-	-	-	-
A-C	81.31	20.33	81.31	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	503.83	0.000	0.00	0.00	0.000	A
D-A	9.79	2.45	9.73	0.00	675.62	0.014	0.00	0.01	5.406	A
D-BC	32.37	8.09	32.10	0.00	500.07	0.065	0.00	0.07	7.690	A
C-ABD	8.34	2.08	8.29	0.00	631.36	0.013	0.00	0.01	5.777	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	330.44	82.61	330.44	0.00	-	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	13.48	3.37	13.47	0.00	709.44	0.019	0.02	0.02	5.172	A
B-AD	3.60	0.90	3.59	0.00	422.88	0.009	0.01	0.01	8.585	A
A-B	9.89	2.47	9.89	0.00	-	-	-	-	-	-
A-C	97.09	24.27	97.09	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	490.21	0.000	0.00	0.00	0.000	A
D-A	11.69	2.92	11.67	0.00	654.63	0.018	0.01	0.02	5.598	A
D-BC	38.66	9.66	38.58	0.00	480.22	0.081	0.07	0.09	8.151	A
C-ABD	9.99	2.50	9.98	0.00	626.85	0.016	0.01	0.02	5.835	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	394.55	98.64	394.55	0.00	-	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	16.52	4.13	16.50	0.00	700.39	0.024	0.02	0.02	5.263	A
B-AD	4.40	1.10	4.39	0.00	402.69	0.011	0.01	0.01	9.038	A
A-B	12.11	3.03	12.11	0.00	-	-	-	-	-	-
A-C	118.91	29.73	118.91	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	471.39	0.000	0.00	0.00	0.000	A
D-A	14.31	3.58	14.29	0.00	625.60	0.023	0.02	0.02	5.888	A
D-BC	47.34	11.84	47.23	0.00	452.78	0.105	0.09	0.12	8.875	A
C-ABD	12.30	3.07	12.28	0.00	621.09	0.020	0.02	0.02	5.912	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	483.16	120.79	483.16	0.00	-	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	16.52	4.13	16.52	0.00	700.33	0.024	0.02	0.02	5.264	A
B-AD	4.40	1.10	4.40	0.00	402.67	0.011	0.01	0.01	9.038	A
A-B	12.11	3.03	12.11	0.00	-	-	-	-	-	-
A-C	118.91	29.73	118.91	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	471.38	0.000	0.00	0.00	0.000	A
D-A	14.31	3.58	14.31	0.00	625.56	0.023	0.02	0.02	5.888	A
D-BC	47.34	11.84	47.34	0.00	452.78	0.105	0.12	0.12	8.879	A
C-ABD	12.30	3.07	12.30	0.00	621.06	0.020	0.02	0.02	5.912	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	483.16	120.79	483.16	0.00	-	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	13.48	3.37	13.50	0.00	709.34	0.019	0.02	0.02	5.173	A
B-AD	3.60	0.90	3.61	0.00	422.85	0.009	0.01	0.01	8.588	A
A-B	9.89	2.47	9.89	0.00	-	-	-	-	-	-
A-C	97.09	24.27	97.09	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	490.21	0.000	0.00	0.00	0.000	A
D-A	11.69	2.92	11.71	0.00	654.56	0.018	0.02	0.02	5.599	A
D-BC	38.66	9.66	38.77	0.00	480.21	0.081	0.12	0.09	8.158	A
C-ABD	9.99	2.50	10.00	0.00	626.80	0.016	0.02	0.02	5.836	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	394.55	98.64	394.55	0.00	-	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	11.29	2.82	11.31	0.00	715.90	0.016	0.02	0.02	5.110	A
B-AD	3.01	0.75	3.02	0.00	437.46	0.007	0.01	0.01	8.286	A
A-B	8.28	2.07	8.28	0.00	-	-	-	-	-	-
A-C	81.31	20.33	81.31	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	503.82	0.000	0.00	0.00	0.000	A
D-A	9.79	2.45	9.80	0.00	675.49	0.014	0.02	0.01	5.409	A
D-BC	32.37	8.09	32.45	0.00	500.06	0.065	0.09	0.07	7.701	A
C-ABD	8.34	2.08	8.35	0.00	631.28	0.013	0.02	0.01	5.778	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	330.44	82.61	330.44	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.23	0.02	5.107	A	A
B-AD	0.10	0.01	8.285	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.21	0.01	5.406	A	A
D-BC	0.99	0.07	7.690	A	A
C-ABD	0.20	0.01	5.777	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:00-08:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.28	0.02	5.172	A	A
B-AD	0.12	0.01	8.585	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.27	0.02	5.598	A	A
D-BC	1.27	0.08	8.151	A	A
C-ABD	0.24	0.02	5.835	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:15-08:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.35	0.02	5.263	A	A
B-AD	0.16	0.01	9.038	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.34	0.02	5.888	A	A
D-BC	1.69	0.11	8.875	A	A
C-ABD	0.30	0.02	5.912	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:30-08:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.36	0.02	5.264	A	A
B-AD	0.16	0.01	9.038	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.35	0.02	5.888	A	A
D-BC	1.74	0.12	8.879	A	A
C-ABD	0.31	0.02	5.912	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:45-09:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.30	0.02	5.173	A	A
B-AD	0.13	0.01	8.588	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.28	0.02	5.599	A	A
D-BC	1.36	0.09	8.158	A	A
C-ABD	0.25	0.02	5.836	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (09:00-09:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.25	0.02	5.110	A	A
B-AD	0.11	0.01	8.286	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.23	0.02	5.409	A	A
D-BC	1.07	0.07	7.701	A	A
C-ABD	0.20	0.01	5.778	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.02	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.07	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.02	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.09	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.02	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.12	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.12	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base, PM	2023 Base	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	J7A A55	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		7.30	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	PONT RONWY		Minor
C	C	A5W		Major
D	D	A55J7A		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.25		0.00		2.20	0.00		
C	7.25		0.00		2.20	145.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.90	5.29	4.38	3.81	✓	2.00	20	24
D	Two lanes		4.90	4.70								34	53

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	573.963	-	-	-	0.210	0.210	0.210	-	0.210	-	-
1	B-AD	524.671	0.090	0.228	-	-	-	0.144	0.326	0.144	0.090	0.228
1	B-C	733.948	0.106	0.269	-	-	-	-	-	-	0.106	0.269
1	C-B	657.934	0.241	0.241	-	-	-	-	-	-	0.241	0.241
1	D-A	782.335	-	-	-	0.287	0.113	0.287	-	0.113	-	-
1	D-BC	602.290	0.165	0.165	0.375	0.262	0.104	0.262	-	0.104	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	219.00	100.000
B	ONE HOUR	✓	23.00	100.000
C	ONE HOUR	✓	215.00	100.000
D	ONE HOUR	✓	73.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	A	164.87	164.87		
16:15-16:30	B	17.32	17.32		
16:15-16:30	C	161.86	161.86		
16:15-16:30	D	54.96	54.96		
16:30-16:45	A	196.88	196.88		
16:30-16:45	B	20.68	20.68		
16:30-16:45	C	193.28	193.28		
16:30-16:45	D	65.63	65.63		
16:45-17:00	A	241.12	241.12		
16:45-17:00	B	25.32	25.32		
16:45-17:00	C	236.72	236.72		
16:45-17:00	D	80.37	80.37		
17:00-17:15	A	241.12	241.12		
17:00-17:15	B	25.32	25.32		
17:00-17:15	C	236.72	236.72		
17:00-17:15	D	80.37	80.37		
17:15-17:30	A	196.88	196.88		
17:15-17:30	B	20.68	20.68		
17:15-17:30	C	193.28	193.28		
17:15-17:30	D	65.63	65.63		
17:30-17:45	A	164.87	164.87		
17:30-17:45	B	17.32	17.32		
17:30-17:45	C	161.86	161.86		
17:30-17:45	D	54.96	54.96		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	11.000	208.000	0.000
	B	8.000	0.000	15.000	0.000
	C	204.000	11.000	0.000	0.000
	D	15.000	0.000	58.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.05	0.95	0.00
	B	0.35	0.00	0.65	0.00
	C	0.95	0.05	0.00	0.00
	D	0.21	0.00	0.79	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.03	5.68	0.03	−1	A	13.76	20.65	1.90	5.52	0.02	1.90	5.52
B-AD	0.02	8.75	0.02	−1	A	7.34	11.01	1.53	8.34	0.02	1.53	8.34
A-B	-	-	-	-	-	10.09	15.14	-	-	-	-	-
A-C	-	-	-	-	-	190.86	286.30	-	-	-	-	-
A-D	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D-A	0.02	5.33	0.02	−1	A	13.76	20.65	1.78	5.17	0.02	1.78	5.17
D-BC	0.13	8.23	0.15	−1	A	53.22	79.83	10.30	7.74	0.11	10.30	7.74
C-ABD	0.02	6.26	0.02	−1	A	10.15	15.23	1.56	6.15	0.02	1.56	6.15
C-D	-	-	-	-	-	0.00	0.00	-	-	-	-	-
C-A	-	-	-	-	-	187.14	280.70	-	-	-	-	-

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	11.29	2.82	11.23	0.00	676.96	0.017	0.00	0.02	5.407	A
B-AD	6.02	1.51	5.97	0.00	453.41	0.013	0.00	0.01	8.044	A
A-B	8.28	2.07	8.28	0.00	-	-	-	-	-	-
A-C	156.59	39.15	156.59	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	540.40	0.000	0.00	0.00	0.000	A
D-A	11.29	2.82	11.23	0.00	721.51	0.016	0.00	0.02	5.068	A
D-BC	43.67	10.92	43.31	0.00	533.25	0.082	0.00	0.09	7.343	A
C-ABD	8.31	2.08	8.25	0.00	609.05	0.014	0.00	0.01	5.991	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	153.55	38.39	153.55	0.00	-	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	13.48	3.37	13.47	0.00	665.69	0.020	0.02	0.02	5.519	A
B-AD	7.19	1.80	7.18	0.00	439.52	0.016	0.01	0.02	8.326	A
A-B	9.89	2.47	9.89	0.00	-	-	-	-	-	-
A-C	186.99	46.75	186.99	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	533.87	0.000	0.00	0.00	0.000	A
D-A	13.48	3.37	13.47	0.00	709.32	0.019	0.02	0.02	5.173	A
D-BC	52.14	13.04	52.05	0.00	519.83	0.100	0.09	0.11	7.696	A
C-ABD	9.94	2.48	9.93	0.00	599.84	0.017	0.01	0.02	6.101	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	183.34	45.84	183.34	0.00	-	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	16.52	4.13	16.49	0.00	650.28	0.025	0.02	0.03	5.679	A
B-AD	8.81	2.20	8.79	0.00	420.37	0.021	0.02	0.02	8.746	A
A-B	12.11	3.03	12.11	0.00	-	-	-	-	-	-
A-C	229.01	57.25	229.01	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	524.86	0.000	0.00	0.00	0.000	A
D-A	16.52	4.13	16.50	0.00	692.47	0.024	0.02	0.02	5.325	A
D-BC	63.86	15.96	63.72	0.00	501.30	0.127	0.11	0.14	8.224	A
C-ABD	12.21	3.05	12.19	0.00	587.45	0.021	0.02	0.02	6.257	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	224.51	56.13	224.51	0.00	-	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	16.52	4.13	16.51	0.00	650.22	0.025	0.03	0.03	5.680	A
B-AD	8.81	2.20	8.81	0.00	420.35	0.021	0.02	0.02	8.747	A
A-B	12.11	3.03	12.11	0.00	-	-	-	-	-	-
A-C	229.01	57.25	229.01	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	524.86	0.000	0.00	0.00	0.000	A
D-A	16.52	4.13	16.52	0.00	692.42	0.024	0.02	0.02	5.325	A
D-BC	63.86	15.96	63.86	0.00	501.29	0.127	0.14	0.15	8.229	A
C-ABD	12.21	3.05	12.21	0.00	587.41	0.021	0.02	0.02	6.257	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	224.51	56.13	224.51	0.00	-	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	13.48	3.37	13.51	0.00	665.57	0.020	0.03	0.02	5.520	A
B-AD	7.19	1.80	7.21	0.00	439.49	0.016	0.02	0.02	8.329	A
A-B	9.89	2.47	9.89	0.00	-	-	-	-	-	-
A-C	186.99	46.75	186.99	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	533.87	0.000	0.00	0.00	0.000	A
D-A	13.48	3.37	13.50	0.00	709.23	0.019	0.02	0.02	5.176	A
D-BC	52.14	13.04	52.27	0.00	519.82	0.100	0.15	0.11	7.703	A
C-ABD	9.94	2.48	9.96	0.00	599.79	0.017	0.02	0.02	6.102	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	183.34	45.84	183.34	0.00	-	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	11.29	2.82	11.31	0.00	676.73	0.017	0.02	0.02	5.409	A
B-AD	6.02	1.51	6.04	0.00	453.35	0.013	0.02	0.01	8.049	A
A-B	8.28	2.07	8.28	0.00	-	-	-	-	-	-
A-C	156.59	39.15	156.59	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	540.39	0.000	0.00	0.00	0.000	A
D-A	11.29	2.82	11.31	0.00	721.33	0.016	0.02	0.02	5.069	A
D-BC	43.67	10.92	43.76	0.00	533.23	0.082	0.11	0.09	7.355	A
C-ABD	8.31	2.08	8.32	0.00	608.94	0.014	0.02	0.01	5.995	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	153.55	38.39	153.55	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.25	0.02	5.407	A	A
B-AD	0.19	0.01	8.044	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.23	0.02	5.068	A	A
D-BC	1.28	0.09	7.343	A	A
C-ABD	0.21	0.01	5.991	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:30-16:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.30	0.02	5.519	A	A
B-AD	0.24	0.02	8.326	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.28	0.02	5.173	A	A
D-BC	1.62	0.11	7.696	A	A
C-ABD	0.25	0.02	6.101	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:45-17:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.38	0.03	5.679	A	A
B-AD	0.31	0.02	8.746	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.36	0.02	5.325	A	A
D-BC	2.12	0.14	8.224	A	A
C-ABD	0.32	0.02	6.257	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:00-17:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.39	0.03	5.680	A	A
B-AD	0.32	0.02	8.747	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.36	0.02	5.325	A	A
D-BC	2.17	0.14	8.229	A	A
C-ABD	0.32	0.02	6.257	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:15-17:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.32	0.02	5.520	A	A
B-AD	0.26	0.02	8.329	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.30	0.02	5.176	A	A
D-BC	1.73	0.12	7.703	A	A
C-ABD	0.26	0.02	6.102	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:30-17:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.26	0.02	5.409	A	A
B-AD	0.21	0.01	8.049	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.24	0.02	5.069	A	A
D-BC	1.38	0.09	7.355	A	A
C-ABD	0.21	0.01	5.995	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.11	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.15	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.11	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base + Dev, AM	2023 Base + Dev	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	J7A A55	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		8.41	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	PONT RONWY		Minor
C	C	A5W		Major
D	D	A55J7A		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.25		0.00		2.20	0.00		
C	7.25		0.00		2.20	145.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.90	5.29	4.38	3.81	✓	2.00	20	24
D	Two lanes		4.90	4.70								34	53

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	573.963	-	-	-	0.210	0.210	0.210	-	0.210	-	-
1	B-AD	499.021	0.086	0.217	-	-	-	0.137	0.310	0.137	0.086	0.217
1	B-C	743.844	0.108	0.273	-	-	-	-	-	-	0.108	0.273
1	C-B	657.934	0.241	0.241	-	-	-	-	-	-	0.241	0.241
1	D-A	782.335	-	-	-	0.287	0.113	0.287	-	0.113	-	-
1	D-BC	602.290	0.165	0.165	0.375	0.262	0.104	0.262	-	0.104	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	119.00	100.000
B	ONE HOUR	✓	120.00	100.000
C	ONE HOUR	✓	475.00	100.000
D	ONE HOUR	✓	132.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	89.59	89.59		
07:45-08:00	B	90.34	90.34		
07:45-08:00	C	357.60	357.60		
07:45-08:00	D	99.38	99.38		
08:00-08:15	A	106.98	106.98		
08:00-08:15	B	107.88	107.88		
08:00-08:15	C	427.02	427.02		
08:00-08:15	D	118.67	118.67		
08:15-08:30	A	131.02	131.02		
08:15-08:30	B	132.12	132.12		
08:15-08:30	C	522.98	522.98		
08:15-08:30	D	145.33	145.33		
08:30-08:45	A	131.02	131.02		
08:30-08:45	B	132.12	132.12		
08:30-08:45	C	522.98	522.98		
08:30-08:45	D	145.33	145.33		
08:45-09:00	A	106.98	106.98		
08:45-09:00	B	107.88	107.88		
08:45-09:00	C	427.02	427.02		
08:45-09:00	D	118.67	118.67		
09:00-09:15	A	89.59	89.59		
09:00-09:15	B	90.34	90.34		
09:00-09:15	C	357.60	357.60		
09:00-09:15	D	99.38	99.38		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	11.000	108.000	0.000
	B	4.000	0.000	116.000	0.000
	C	439.000	36.000	0.000	0.000
	D	13.000	76.000	43.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.09	0.91	0.00
	B	0.03	0.00	0.97	0.00
	C	0.92	0.08	0.00	0.00
	D	0.10	0.58	0.33	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.19	6.45	0.23	−1	A	106.44	159.67	16.26	6.11	0.18	16.26	6.11
B-AD	0.01	9.70	0.01	−1	A	3.67	5.51	0.84	9.16	0.01	0.84	9.16
A-B	-	-	-	-	-	10.09	15.14	-	-	-	-	-
A-C	-	-	-	-	-	99.10	148.65	-	-	-	-	-
A-D	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D-A	0.02	6.19	0.02	−1	A	11.93	17.89	1.75	5.86	0.02	1.75	5.86
D-BC	0.29	11.19	0.40	−1	B	109.20	163.79	26.97	9.88	0.30	26.97	9.88
C-ABD	0.07	6.28	0.07	−1	A	34.34	51.51	5.41	6.31	0.06	5.41	6.31
C-D	-	-	-	-	-	0.00	0.00	-	-	-	-	-
C-A	-	-	-	-	-	401.53	602.29	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	87.33	21.83	86.77	0.00	704.52	0.124	0.00	0.14	5.823	A
B-AD	3.01	0.75	2.98	0.00	415.02	0.007	0.00	0.01	8.737	A
A-B	8.28	2.07	8.28	0.00	-	-	-	-	-	-
A-C	81.31	20.33	81.31	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	503.83	0.000	0.00	0.00	0.000	A
D-A	9.79	2.45	9.73	0.00	655.98	0.015	0.00	0.02	5.570	A
D-BC	89.59	22.40	88.73	0.00	500.07	0.179	0.00	0.22	8.733	A
C-ABD	27.75	6.94	27.56	0.00	624.26	0.044	0.00	0.05	6.032	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	329.86	82.46	329.86	0.00	-	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	104.28	26.07	104.14	0.00	696.68	0.150	0.14	0.17	6.073	A
B-AD	3.60	0.90	3.59	0.00	398.46	0.009	0.01	0.01	9.116	A
A-B	9.89	2.47	9.89	0.00	-	-	-	-	-	-
A-C	97.09	24.27	97.09	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	490.21	0.000	0.00	0.00	0.000	A
D-A	11.69	2.92	11.67	0.00	630.66	0.019	0.02	0.02	5.815	A
D-BC	106.98	26.74	106.71	0.00	480.22	0.223	0.22	0.28	9.631	A
C-ABD	33.49	8.37	33.44	0.00	619.96	0.054	0.05	0.06	6.137	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	393.53	98.38	393.53	0.00	-	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	127.72	31.93	127.51	0.00	685.99	0.186	0.17	0.23	6.445	A
B-AD	4.40	1.10	4.39	0.00	375.66	0.012	0.01	0.01	9.696	A
A-B	12.11	3.03	12.11	0.00	-	-	-	-	-	-
A-C	118.91	29.73	118.91	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	471.38	0.000	0.00	0.00	0.000	A
D-A	14.31	3.58	14.29	0.00	595.63	0.024	0.02	0.02	6.192	A
D-BC	131.02	32.76	130.55	0.00	452.78	0.289	0.28	0.40	11.155	B
C-ABD	41.79	10.45	41.72	0.00	615.70	0.068	0.06	0.07	6.272	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	481.20	120.30	481.20	0.00	-	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	127.72	31.93	127.71	0.00	685.90	0.186	0.23	0.23	6.448	A
B-AD	4.40	1.10	4.40	0.00	375.57	0.012	0.01	0.01	9.698	A
A-B	12.11	3.03	12.11	0.00	-	-	-	-	-	-
A-C	118.91	29.73	118.91	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	471.38	0.000	0.00	0.00	0.000	A
D-A	14.31	3.58	14.31	0.00	595.46	0.024	0.02	0.02	6.193	A
D-BC	131.02	32.76	131.01	0.00	452.77	0.289	0.40	0.40	11.188	B
C-ABD	41.79	10.45	41.78	0.00	615.59	0.068	0.07	0.07	6.275	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	481.20	120.30	481.20	0.00	-	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	104.28	26.07	104.48	0.00	696.55	0.150	0.23	0.18	6.084	A
B-AD	3.60	0.90	3.61	0.00	398.33	0.009	0.01	0.01	9.120	A
A-B	9.89	2.47	9.89	0.00	-	-	-	-	-	-
A-C	97.09	24.27	97.09	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	490.20	0.000	0.00	0.00	0.000	A
D-A	11.69	2.92	11.71	0.00	630.39	0.019	0.02	0.02	5.820	A
D-BC	106.98	26.74	107.43	0.00	480.21	0.223	0.40	0.29	9.668	A
C-ABD	33.49	8.37	33.55	0.00	619.79	0.054	0.07	0.06	6.140	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	393.53	98.38	393.53	0.00	-	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	87.33	21.83	87.47	0.00	704.31	0.124	0.18	0.14	5.836	A
B-AD	3.01	0.75	3.02	0.00	414.79	0.007	0.01	0.01	8.742	A
A-B	8.28	2.07	8.28	0.00	-	-	-	-	-	-
A-C	81.31	20.33	81.31	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	503.82	0.000	0.00	0.00	0.000	A
D-A	9.79	2.45	9.80	0.00	655.57	0.015	0.02	0.02	5.574	A
D-BC	89.59	22.40	89.87	0.00	500.05	0.179	0.29	0.22	8.782	A
C-ABD	27.75	6.94	27.79	0.00	623.99	0.044	0.06	0.05	6.038	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	329.86	82.46	329.86	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	2.05	0.14	5.823	A	A
B-AD	0.10	0.01	8.737	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.22	0.01	5.570	A	A
D-BC	3.10	0.21	8.733	A	A
C-ABD	0.70	0.05	6.032	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:00-08:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	2.57	0.17	6.073	A	A
B-AD	0.13	0.01	9.116	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.28	0.02	5.815	A	A
D-BC	4.13	0.28	9.631	A	A
C-ABD	0.87	0.06	6.137	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:15-08:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	3.33	0.22	6.445	A	A
B-AD	0.17	0.01	9.696	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.36	0.02	6.192	A	A
D-BC	5.80	0.39	11.155	B	B
C-ABD	1.12	0.07	6.272	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:30-08:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	3.41	0.23	6.448	A	A
B-AD	0.18	0.01	9.698	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.37	0.02	6.193	A	A
D-BC	6.04	0.40	11.188	B	B
C-ABD	1.13	0.08	6.275	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:45-09:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	2.72	0.18	6.084	A	A
B-AD	0.14	0.01	9.120	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.29	0.02	5.820	A	A
D-BC	4.50	0.30	9.668	A	A
C-ABD	0.88	0.06	6.140	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (09:00-09:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	2.18	0.15	5.836	A	A
B-AD	0.11	0.01	8.742	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.23	0.02	5.574	A	A
D-BC	3.40	0.23	8.782	A	A
C-ABD	0.71	0.05	6.038	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.22	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.17	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.28	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.06	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.23	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.40	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.23	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.40	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.18	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.29	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.06	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.22	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base + Dev, PM	2023 Base + Dev	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	J7A A55	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		8.31	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	PONT RONWY		Minor
C	C	A5W		Major
D	D	A55J7A		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.25		0.00		2.20	0.00		
C	7.25		0.00		2.20	145.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.90	5.29	4.38	3.81	✓	2.00	20	24
D	Two lanes		4.90	4.70								34	53

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	573.963	-	-	-	0.210	0.210	0.210	-	0.210	-	-
1	B-AD	499.870	0.086	0.218	-	-	-	0.137	0.311	0.137	0.086	0.218
1	B-C	743.187	0.108	0.272	-	-	-	-	-	-	0.108	0.272
1	C-B	657.934	0.241	0.241	-	-	-	-	-	-	0.241	0.241
1	D-A	782.335	-	-	-	0.287	0.113	0.287	-	0.113	-	-
1	D-BC	602.290	0.165	0.165	0.375	0.262	0.104	0.262	-	0.104	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	219.00	100.000
B	ONE HOUR	✓	124.00	100.000
C	ONE HOUR	✓	240.00	100.000
D	ONE HOUR	✓	149.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	A	164.87	164.87		
16:15-16:30	B	93.35	93.35		
16:15-16:30	C	180.68	180.68		
16:15-16:30	D	112.18	112.18		
16:30-16:45	A	196.88	196.88		
16:30-16:45	B	111.47	111.47		
16:30-16:45	C	215.76	215.76		
16:30-16:45	D	133.95	133.95		
16:45-17:00	A	241.12	241.12		
16:45-17:00	B	136.53	136.53		
16:45-17:00	C	264.24	264.24		
16:45-17:00	D	164.05	164.05		
17:00-17:15	A	241.12	241.12		
17:00-17:15	B	136.53	136.53		
17:00-17:15	C	264.24	264.24		
17:00-17:15	D	164.05	164.05		
17:15-17:30	A	196.88	196.88		
17:15-17:30	B	111.47	111.47		
17:15-17:30	C	215.76	215.76		
17:15-17:30	D	133.95	133.95		
17:30-17:45	A	164.87	164.87		
17:30-17:45	B	93.35	93.35		
17:30-17:45	C	180.68	180.68		
17:30-17:45	D	112.18	112.18		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	11.000	208.000	0.000
	B	8.000	0.000	116.000	0.000
	C	204.000	36.000	0.000	0.000
	D	15.000	76.000	58.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.05	0.95	0.00
	B	0.06	0.00	0.94	0.00
	C	0.85	0.15	0.00	0.00
	D	0.10	0.51	0.39	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.20	6.90	0.24	−1	A	106.44	159.67	17.19	6.46	0.19	17.19	6.46
B-AD	0.02	9.59	0.02	−1	A	7.34	11.01	1.66	9.07	0.02	1.66	9.07
A-B	-	-	-	-	-	10.09	15.14	-	-	-	-	-
A-C	-	-	-	-	-	190.86	286.30	-	-	-	-	-
A-D	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D-A	0.02	5.57	0.03	−1	A	13.76	20.65	1.85	5.37	0.02	1.85	5.37
D-BC	0.29	10.18	0.41	−1	B	122.96	184.44	28.18	9.17	0.31	28.19	9.17
C-ABD	0.07	6.74	0.08	−1	A	33.70	50.55	5.57	6.61	0.06	5.57	6.61
C-D	-	-	-	-	-	0.00	0.00	-	-	-	-	-
C-A	-	-	-	-	-	186.53	279.79	-	-	-	-	-

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	87.33	21.83	86.75	0.00	679.17	0.129	0.00	0.15	6.070	A
B-AD	6.02	1.51	5.97	0.00	421.10	0.014	0.00	0.01	8.671	A
A-B	8.28	2.07	8.28	0.00	-	-	-	-	-	-
A-C	156.59	39.15	156.59	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	540.40	0.000	0.00	0.00	0.000	A
D-A	11.29	2.82	11.23	0.00	701.75	0.016	0.00	0.02	5.213	A
D-BC	100.88	25.22	99.96	0.00	533.25	0.189	0.00	0.23	8.291	A
C-ABD	27.42	6.86	27.23	0.00	598.55	0.046	0.00	0.05	6.300	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	153.26	38.32	153.26	0.00	-	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	104.28	26.07	104.13	0.00	666.49	0.156	0.15	0.18	6.400	A
B-AD	7.19	1.80	7.18	0.00	405.53	0.018	0.01	0.02	9.037	A
A-B	9.89	2.47	9.89	0.00	-	-	-	-	-	-
A-C	186.99	46.75	186.99	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	533.87	0.000	0.00	0.00	0.000	A
D-A	13.48	3.37	13.47	0.00	685.21	0.020	0.02	0.02	5.358	A
D-BC	120.46	30.12	120.19	0.00	519.83	0.232	0.23	0.30	9.001	A
C-ABD	32.93	8.23	32.89	0.00	588.09	0.056	0.05	0.06	6.483	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	182.82	45.71	182.82	0.00	-	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	127.72	31.93	127.48	0.00	649.13	0.197	0.18	0.24	6.898	A
B-AD	8.81	2.20	8.79	0.00	384.06	0.023	0.02	0.02	9.593	A
A-B	12.11	3.03	12.11	0.00	-	-	-	-	-	-
A-C	229.01	57.25	229.01	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	524.86	0.000	0.00	0.00	0.000	A
D-A	16.52	4.13	16.49	0.00	662.35	0.025	0.02	0.03	5.573	A
D-BC	147.54	36.88	147.09	0.00	501.29	0.294	0.30	0.41	10.150	B
C-ABD	40.75	10.19	40.68	0.00	574.70	0.071	0.06	0.08	6.741	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	223.50	55.87	223.50	0.00	-	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	127.72	31.93	127.71	0.00	649.04	0.197	0.24	0.24	6.904	A
B-AD	8.81	2.20	8.81	0.00	383.97	0.023	0.02	0.02	9.595	A
A-B	12.11	3.03	12.11	0.00	-	-	-	-	-	-
A-C	229.01	57.25	229.01	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	524.86	0.000	0.00	0.00	0.000	A
D-A	16.52	4.13	16.51	0.00	662.18	0.025	0.03	0.03	5.575	A
D-BC	147.54	36.88	147.52	0.00	501.29	0.294	0.41	0.41	10.176	B
C-ABD	40.75	10.19	40.75	0.00	574.60	0.071	0.08	0.08	6.742	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	223.50	55.87	223.50	0.00	-	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	104.28	26.07	104.51	0.00	666.33	0.157	0.24	0.19	6.412	A
B-AD	7.19	1.80	7.21	0.00	405.39	0.018	0.02	0.02	9.041	A
A-B	9.89	2.47	9.89	0.00	-	-	-	-	-	-
A-C	186.99	46.75	186.99	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	533.86	0.000	0.00	0.00	0.000	A
D-A	13.48	3.37	13.51	0.00	684.94	0.020	0.03	0.02	5.363	A
D-BC	120.46	30.12	120.90	0.00	519.82	0.232	0.41	0.31	9.035	A
C-ABD	32.93	8.23	33.00	0.00	587.92	0.056	0.08	0.06	6.487	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	182.82	45.71	182.82	0.00	-	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	87.33	21.83	87.48	0.00	678.90	0.129	0.19	0.15	6.087	A
B-AD	6.02	1.51	6.04	0.00	420.86	0.014	0.02	0.01	8.680	A
A-B	8.28	2.07	8.28	0.00	-	-	-	-	-	-
A-C	156.59	39.15	156.59	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	540.38	0.000	0.00	0.00	0.000	A
D-A	11.29	2.82	11.31	0.00	701.31	0.016	0.02	0.02	5.219	A
D-BC	100.88	25.22	101.16	0.00	533.23	0.189	0.31	0.24	8.338	A
C-ABD	27.42	6.86	27.47	0.00	598.26	0.046	0.06	0.05	6.306	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	153.26	38.32	153.26	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	2.13	0.14	6.070	A	A
B-AD	0.21	0.01	8.671	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.24	0.02	5.213	A	A
D-BC	3.32	0.22	8.291	A	A
C-ABD	0.71	0.05	6.300	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:30-16:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	2.71	0.18	6.400	A	A
B-AD	0.26	0.02	9.037	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.29	0.02	5.358	A	A
D-BC	4.35	0.29	9.001	A	A
C-ABD	0.90	0.06	6.483	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:45-17:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	3.56	0.24	6.898	A	A
B-AD	0.34	0.02	9.593	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.37	0.02	5.573	A	A
D-BC	5.96	0.40	10.150	B	B
C-ABD	1.16	0.08	6.741	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:00-17:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	3.65	0.24	6.904	A	A
B-AD	0.35	0.02	9.595	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.38	0.03	5.575	A	A
D-BC	6.19	0.41	10.176	B	B
C-ABD	1.17	0.08	6.742	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:15-17:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	2.87	0.19	6.412	A	A
B-AD	0.28	0.02	9.041	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.31	0.02	5.363	A	A
D-BC	4.72	0.31	9.035	A	A
C-ABD	0.91	0.06	6.487	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:30-17:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	2.28	0.15	6.087	A	A
B-AD	0.22	0.01	8.680	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.25	0.02	5.219	A	A
D-BC	3.63	0.24	8.338	A	A
C-ABD	0.73	0.05	6.306	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.15	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.23	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.18	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.30	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.06	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.24	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.41	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.08	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.24	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.41	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.08	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.19	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.31	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.06	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.15	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.24	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev + Seasonality, AM Aug

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Rel
2023 Base + Dev + Seasonality, AM Aug	2023 Base + Dev + Seasonality	AM Aug		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	J7A A55	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		9.88	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	PONT RONWY		Minor
C	C	A5W		Major
D	D	A55J7A		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.25		0.00		2.20	0.00		
C	7.25		0.00		2.20	145.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.90	5.29	4.38	3.81	✓	2.00	20	24
D	Two lanes		4.90	4.70								34	53

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	573.963	-	-	-	0.210	0.210	0.210	-	0.210	-	-
1	B-AD	499.021	0.086	0.217	-	-	-	0.137	0.310	0.137	0.086	0.217
1	B-C	743.844	0.108	0.273	-	-	-	-	-	-	0.108	0.273
1	C-B	657.934	0.241	0.241	-	-	-	-	-	-	0.241	0.241
1	D-A	782.335	-	-	-	0.287	0.113	0.287	-	0.113	-	-
1	D-BC	602.290	0.165	0.165	0.375	0.262	0.104	0.262	-	0.104	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	159.00	100.000
B	ONE HOUR	✓	127.00	100.000
C	ONE HOUR	✓	627.00	100.000
D	ONE HOUR	✓	151.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowinPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	119.70	119.70		
07:45-08:00	B	95.61	95.61		
07:45-08:00	C	472.04	472.04		
07:45-08:00	D	113.68	113.68		
08:00-08:15	A	142.94	142.94		
08:00-08:15	B	114.17	114.17		
08:00-08:15	C	563.66	563.66		
08:00-08:15	D	135.75	135.75		
08:15-08:30	A	175.06	175.06		
08:15-08:30	B	139.83	139.83		
08:15-08:30	C	690.34	690.34		
08:15-08:30	D	166.25	166.25		
08:30-08:45	A	175.06	175.06		
08:30-08:45	B	139.83	139.83		
08:30-08:45	C	690.34	690.34		
08:30-08:45	D	166.25	166.25		
08:45-09:00	A	142.94	142.94		
08:45-09:00	B	114.17	114.17		
08:45-09:00	C	563.66	563.66		
08:45-09:00	D	135.75	135.75		
09:00-09:15	A	119.70	119.70		
09:00-09:15	B	95.61	95.61		
09:00-09:15	C	472.04	472.04		
09:00-09:15	D	113.68	113.68		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	14.000	145.000	0.000
	B	6.000	0.000	121.000	0.000
	C	588.000	39.000	0.000	0.000
	D	17.000	76.000	58.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.09	0.91	0.00
	B	0.05	0.00	0.95	0.00
	C	0.94	0.06	0.00	0.00
	D	0.11	0.50	0.38	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.20	6.72	0.25	−1	A	111.03	166.55	17.54	6.32	0.19	17.54	6.32
B-AD	0.02	10.82	0.02	−1	B	5.51	8.26	1.38	10.01	0.02	1.38	10.01
A-B	-	-	-	-	-	12.85	19.27	-	-	-	-	-
A-C	-	-	-	-	-	133.05	199.58	-	-	-	-	-
A-D	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D-A	0.03	6.91	0.04	−1	A	15.60	23.40	2.50	6.40	0.03	2.50	6.40
D-BC	0.37	14.14	0.57	1.00	B	122.96	184.44	36.34	11.82	0.40	36.34	11.82
C-ABD	0.08	6.38	0.09	−1	A	37.93	56.90	6.15	6.48	0.07	6.15	6.48
C-D	-	-	-	-	-	0.00	0.00	-	-	-	-	-
C-A	-	-	-	-	-	537.41	806.12	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	91.10	22.77	90.49	0.00	692.88	0.131	0.00	0.15	5.969	A
B-AD	4.52	1.13	4.47	0.00	390.28	0.012	0.00	0.01	9.329	A
A-B	10.54	2.63	10.54	0.00	-	-	-	-	-	-
A-C	109.16	27.29	109.16	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	479.92	0.000	0.00	0.00	0.000	A
D-A	12.80	3.20	12.71	0.00	618.70	0.021	0.00	0.02	5.940	A
D-BC	100.88	25.22	99.79	0.00	465.29	0.217	0.00	0.27	9.820	A
C-ABD	30.40	7.60	30.20	0.00	618.86	0.049	0.00	0.05	6.114	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	441.63	110.41	441.63	0.00	-	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	108.78	27.19	108.63	0.00	682.66	0.159	0.15	0.19	6.269	A
B-AD	5.39	1.35	5.38	0.00	368.86	0.015	0.01	0.01	9.904	A
A-B	12.59	3.15	12.59	0.00	-	-	-	-	-	-
A-C	130.35	32.59	130.35	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	461.66	0.000	0.00	0.00	0.000	A
D-A	15.28	3.82	15.26	0.00	585.67	0.026	0.02	0.03	6.310	A
D-BC	120.46	30.12	120.07	0.00	438.69	0.275	0.27	0.37	11.283	B
C-ABD	36.90	9.23	36.85	0.00	614.72	0.060	0.05	0.07	6.229	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	526.76	131.69	526.76	0.00	-	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	133.22	33.31	132.99	0.00	668.69	0.199	0.19	0.25	6.717	A
B-AD	6.61	1.65	6.59	0.00	339.36	0.019	0.01	0.02	10.818	B
A-B	15.41	3.85	15.41	0.00	-	-	-	-	-	-
A-C	159.65	39.91	159.65	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	436.42	0.000	0.00	0.00	0.000	A
D-A	18.72	4.68	18.68	0.00	539.71	0.035	0.03	0.04	6.908	A
D-BC	147.54	36.88	146.76	0.00	401.92	0.367	0.37	0.57	14.065	B
C-ABD	46.49	11.62	46.41	0.00	611.47	0.076	0.07	0.09	6.371	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	643.85	160.96	643.85	0.00	-	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	133.22	33.31	133.22	0.00	668.54	0.199	0.25	0.25	6.724	A
B-AD	6.61	1.65	6.61	0.00	339.22	0.019	0.02	0.02	10.822	B
A-B	15.41	3.85	15.41	0.00	-	-	-	-	-	-
A-C	159.65	39.91	159.65	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	436.41	0.000	0.00	0.00	0.000	A
D-A	18.72	4.68	18.72	0.00	539.42	0.035	0.04	0.04	6.912	A
D-BC	147.54	36.88	147.51	0.00	401.91	0.367	0.57	0.57	14.144	B
C-ABD	46.49	11.62	46.49	0.00	611.30	0.076	0.09	0.09	6.375	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	643.85	160.96	643.85	0.00	-	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	108.78	27.19	109.00	0.00	682.43	0.159	0.25	0.19	6.282	A
B-AD	5.39	1.35	5.41	0.00	368.64	0.015	0.02	0.02	9.911	A
A-B	12.59	3.15	12.59	0.00	-	-	-	-	-	-
A-C	130.35	32.59	130.35	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	461.65	0.000	0.00	0.00	0.000	A
D-A	15.28	3.82	15.32	0.00	586.22	0.026	0.04	0.03	6.318	A
D-BC	120.48	30.12	121.22	0.00	438.67	0.275	0.57	0.38	11.366	B
C-ABD	36.90	9.23	36.98	0.00	614.44	0.060	0.09	0.07	6.234	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	526.76	131.69	526.76	0.00	-	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	91.10	22.77	91.25	0.00	692.57	0.132	0.19	0.15	5.990	A
B-AD	4.52	1.13	4.53	0.00	389.97	0.012	0.02	0.01	9.339	A
A-B	10.54	2.63	10.54	0.00	-	-	-	-	-	-
A-C	109.18	27.29	109.16	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	479.91	0.000	0.00	0.00	0.000	A
D-A	12.80	3.20	12.82	0.00	618.13	0.021	0.03	0.02	5.949	A
D-BC	100.88	25.22	101.30	0.00	465.27	0.217	0.38	0.28	9.903	A
C-ABD	30.41	7.60	30.46	0.00	618.51	0.049	0.07	0.05	6.124	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	441.63	110.41	441.63	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	2.19	0.15	5.969	A	A
B-AD	0.17	0.01	9.329	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.31	0.02	5.940	A	A
D-BC	3.91	0.26	9.820	A	A
C-ABD	0.78	0.05	6.114	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:00-08:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	2.77	0.18	6.269	A	A
B-AD	0.22	0.01	9.904	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.39	0.03	6.310	A	A
D-BC	5.40	0.36	11.283	B	B
C-ABD	0.98	0.07	6.229	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:15-08:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	3.62	0.24	6.717	A	A
B-AD	0.29	0.02	10.818	B	B
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.52	0.03	6.908	A	A
D-BC	8.11	0.54	14.065	B	B
C-ABD	1.29	0.09	6.371	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:30-08:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	3.71	0.25	6.724	A	A
B-AD	0.30	0.02	10.822	B	B
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.54	0.04	6.912	A	A
D-BC	8.56	0.57	14.144	B	B
C-ABD	1.30	0.09	6.375	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:45-09:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	2.93	0.20	6.282	A	A
B-AD	0.23	0.02	9.911	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.41	0.03	6.318	A	A
D-BC	6.01	0.40	11.366	B	B
C-ABD	1.00	0.07	6.234	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (09:00-09:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	2.33	0.16	5.990	A	A
B-AD	0.18	0.01	9.339	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.33	0.02	5.949	A	A
D-BC	4.35	0.29	9.903	A	A
C-ABD	0.80	0.05	6.124	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.15	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.27	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.19	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.37	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.25	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.57	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.25	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.57	0.00	0.00	0.00	1.00			N/A	N/A
C-ABD	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.19	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.38	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.15	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.01	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.28	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev + Seasonality, PM Aug

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Rel
2023 Base + Dev + Seasonality, PM Aug	2023 Base + Dev + Seasonality	PM Aug		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	J7A A55	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		9.47	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	PONT RONWY		Minor
C	C	A5W		Major
D	D	A55J7A		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.25		0.00		2.20	0.00		
C	7.25		0.00		2.20	145.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.90	5.29	4.38	3.81	✓	2.00	20	24
D	Two lanes		4.90	4.70								34	53

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	573.963	-	-	-	0.210	0.210	0.210	-	0.210	-	-
1	B-AD	501.517	0.086	0.218	-	-	-	0.137	0.312	0.137	0.086	0.218
1	B-C	741.914	0.108	0.272	-	-	-	-	-	-	0.108	0.272
1	C-B	657.934	0.241	0.241	-	-	-	-	-	-	0.241	0.241
1	D-A	782.335	-	-	-	0.287	0.113	0.287	-	0.113	-	-
1	D-BC	602.290	0.165	0.165	0.375	0.262	0.104	0.262	-	0.104	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	293.00	100.000
B	ONE HOUR	✓	132.00	100.000
C	ONE HOUR	✓	312.00	100.000
D	ONE HOUR	✓	174.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	A	220.59	220.59		
16:15-16:30	B	99.38	99.38		
16:15-16:30	C	234.89	234.89		
16:15-16:30	D	131.00	131.00		
16:30-16:45	A	263.40	263.40		
16:30-16:45	B	118.67	118.67		
16:30-16:45	C	280.48	280.48		
16:30-16:45	D	156.42	156.42		
16:45-17:00	A	322.60	322.60		
16:45-17:00	B	145.33	145.33		
16:45-17:00	C	343.52	343.52		
16:45-17:00	D	191.58	191.58		
17:00-17:15	A	322.60	322.60		
17:00-17:15	B	145.33	145.33		
17:00-17:15	C	343.52	343.52		
17:00-17:15	D	191.58	191.58		
17:15-17:30	A	263.40	263.40		
17:15-17:30	B	118.67	118.67		
17:15-17:30	C	280.48	280.48		
17:15-17:30	D	156.42	156.42		
17:30-17:45	A	220.59	220.59		
17:30-17:45	B	99.38	99.38		
17:30-17:45	C	234.89	234.89		
17:30-17:45	D	131.00	131.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	14.000	279.000	0.000
	B	11.000	0.000	121.000	0.000
	C	273.000	39.000	0.000	0.000
	D	20.000	76.000	78.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.05	0.95	0.00
	B	0.08	0.00	0.92	0.00
	C	0.88	0.13	0.00	0.00
	D	0.11	0.44	0.45	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.22	7.42	0.27	−1	A	111.03	166.55	19.00	6.84	0.21	19.00	6.85
B-AD	0.03	10.61	0.04	−1	B	10.09	15.14	2.48	9.84	0.03	2.48	9.84
A-B	-	-	-	-	-	12.85	19.27	-	-	-	-	-
A-C	-	-	-	-	-	256.02	384.02	-	-	-	-	-
A-D	0.00	0.00	0.00	−1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D-A	0.04	5.93	0.04	−1	A	18.35	27.53	2.59	5.65	0.03	2.59	5.65
D-BC	0.36	12.10	0.56	1.00	B	141.31	211.97	37.05	10.49	0.41	37.06	10.49
C-ABD	0.08	7.05	0.09	−1	A	36.92	55.38	6.39	6.92	0.07	6.39	6.92
C-D	-	-	-	-	-	0.00	0.00	-	-	-	-	-
C-A	-	-	-	-	-	249.38	374.06	-	-	-	-	-

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	91.10	22.77	90.46	0.00	658.14	0.138	0.00	0.16	6.335	A
B-AD	8.28	2.07	8.20	0.00	399.47	0.021	0.00	0.02	9.198	A
A-B	10.54	2.63	10.54	0.00	-	-	-	-	-	-
A-C	210.05	52.51	210.05	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	529.00	0.000	0.00	0.00	0.000	A
D-A	15.06	3.76	14.97	0.00	680.06	0.022	0.00	0.02	5.412	A
D-BC	115.94	28.98	114.78	0.00	509.84	0.227	0.00	0.29	9.087	A
C-ABD	29.89	7.47	29.68	0.00	583.88	0.051	0.00	0.05	6.496	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	205.00	51.25	205.00	0.00	-	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	108.78	27.19	108.60	0.00	641.50	0.170	0.16	0.20	6.754	A
B-AD	9.89	2.47	9.87	0.00	379.31	0.026	0.02	0.03	9.744	A
A-B	12.59	3.15	12.59	0.00	-	-	-	-	-	-
A-C	250.82	62.70	250.82	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	520.26	0.000	0.00	0.00	0.000	A
D-A	17.98	4.49	17.96	0.00	658.81	0.027	0.02	0.03	5.617	A
D-BC	138.44	34.61	138.06	0.00	491.88	0.281	0.29	0.39	10.163	B
C-ABD	36.02	9.00	35.96	0.00	571.26	0.063	0.05	0.07	6.725	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	244.46	61.12	244.46	0.00	-	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	133.22	33.31	132.95	0.00	618.69	0.215	0.20	0.27	7.408	A
B-AD	12.11	3.03	12.08	0.00	351.49	0.034	0.03	0.04	10.604	B
A-B	15.41	3.85	15.41	0.00	-	-	-	-	-	-
A-C	307.18	76.80	307.18	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	508.18	0.000	0.00	0.00	0.000	A
D-A	22.02	5.51	21.99	0.00	629.24	0.035	0.03	0.04	5.928	A
D-BC	169.56	42.39	168.87	0.00	467.06	0.363	0.39	0.56	12.043	B
C-ABD	44.85	11.21	44.76	0.00	555.48	0.081	0.07	0.09	7.049	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	298.67	74.67	298.67	0.00	-	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	133.22	33.31	133.22	0.00	618.54	0.215	0.27	0.27	6.769	A
B-AD	12.11	3.03	12.11	0.00	351.36	0.034	0.04	0.04	10.611	B
A-B	15.41	3.85	15.41	0.00	-	-	-	-	-	-
A-C	307.18	76.80	307.18	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	508.17	0.000	0.00	0.00	0.000	A
D-A	22.02	5.51	22.02	0.00	628.97	0.035	0.04	0.04	5.930	A
D-BC	169.56	42.39	169.54	0.00	467.05	0.363	0.56	0.56	12.098	B
C-ABD	44.85	11.21	44.85	0.00	555.32	0.081	0.09	0.09	7.051	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	298.67	74.67	298.67	0.00	-	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	108.78	27.19	109.04	0.00	641.26	0.170	0.27	0.21	6.769	A
B-AD	9.89	2.47	9.92	0.00	379.10	0.026	0.04	0.03	9.751	A
A-B	12.59	3.15	12.59	0.00	-	-	-	-	-	-
A-C	250.82	62.70	250.82	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	520.24	0.000	0.00	0.00	0.000	A
D-A	17.98	4.49	18.01	0.00	658.40	0.027	0.04	0.03	5.621	A
D-BC	138.44	34.61	139.11	0.00	491.86	0.281	0.56	0.40	10.226	B
C-ABD	36.02	9.01	36.10	0.00	571.00	0.063	0.09	0.07	6.733	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	244.46	61.12	244.46	0.00	-	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	91.10	22.77	91.27	0.00	657.77	0.138	0.21	0.16	6.358	A
B-AD	8.28	2.07	8.30	0.00	399.16	0.021	0.03	0.02	9.212	A
A-B	10.54	2.63	10.54	0.00	-	-	-	-	-	-
A-C	210.05	52.51	210.05	0.00	-	-	-	-	-	-
A-D	0.00	0.00	0.00	0.00	528.98	0.000	0.00	0.00	0.000	A
D-A	15.06	3.76	15.08	0.00	679.46	0.022	0.03	0.02	5.420	A
D-BC	115.94	28.98	116.34	0.00	509.81	0.227	0.40	0.30	9.158	A
C-ABD	29.89	7.47	29.95	0.00	583.50	0.051	0.07	0.06	6.503	A
C-D	0.00	0.00	0.00	0.00	-	-	-	-	-	-
C-A	205.00	51.25	205.00	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	2.32	0.15	6.335	A	A
B-AD	0.30	0.02	9.198	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.33	0.02	5.412	A	A
D-BC	4.17	0.28	9.087	A	A
C-ABD	0.81	0.05	6.496	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:30-16:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	2.97	0.20	6.754	A	A
B-AD	0.39	0.03	9.744	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.41	0.03	5.617	A	A
D-BC	5.61	0.37	10.163	B	B
C-ABD	1.02	0.07	6.725	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:45-17:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	3.98	0.27	7.408	A	A
B-AD	0.52	0.03	10.604	B	B
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.53	0.04	5.928	A	A
D-BC	8.05	0.54	12.043	B	B
C-ABD	1.35	0.09	7.049	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:00-17:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	4.09	0.27	7.416	A	A
B-AD	0.53	0.04	10.611	B	B
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.54	0.04	5.930	A	A
D-BC	8.43	0.56	12.098	B	B
C-ABD	1.36	0.09	7.051	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:15-17:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	3.16	0.21	6.769	A	A
B-AD	0.42	0.03	9.751	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.43	0.03	5.621	A	A
D-BC	6.19	0.41	10.226	B	B
C-ABD	1.04	0.07	6.733	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:30-17:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	2.48	0.17	6.358	A	A
B-AD	0.33	0.02	9.212	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
A-D	0.00	0.00	0.000	A	A
D-A	0.35	0.02	5.420	A	A
D-BC	4.61	0.31	9.158	A	A
C-ABD	0.83	0.06	6.503	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.16	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.29	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.20	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.39	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.27	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.56	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.27	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.56	0.00	0.00	0.00	1.00	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.09	−1	−1	−1	−1			N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q85 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.21	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.03	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.03	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.40	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.07	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q85 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.16	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.02	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
A-D	0.00	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-A	0.02	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.30	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.08	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: Tollgate_FINAL_ADVANCED.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\Tollgate
Report generation date: 14/06/2018 15:03:24

Summary of junction performance

	AM					PM				
	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2017 Base									
Stream B-C	0.08	~1	15.16	0.08	C	0.12	~1	12.04	0.11	B
Stream B-AD	1.72	5.00	27.89	0.64	D	0.91	2.00	19.62	0.48	C
Stream A-BCD	0.00	~1	0.00	0.00	A	0.01	200.00	4.58	0.01	A
Stream A-B	-	-	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-	-	-
Stream D-A	0.04	~1	9.10	0.04	A	0.01	~1	7.74	0.01	A
Stream D-BC	0.17	~1	12.68	0.15	B	0.09	~1	10.31	0.09	B
Stream C-ABD	0.05	~1	4.59	0.04	A	0.12	~1	5.67	0.07	A
Stream C-D	-	-	-	-	-	-	-	-	-	-
Stream C-A	-	-	-	-	-	-	-	-	-	-
	A1 - 2023 Base									
Stream B-C	0.10	~1	18.28	0.10	C	0.13	~1	13.07	0.12	B
Stream B-AD	2.17	7.00	33.51	0.70	D	1.05	2.00	21.59	0.52	C
Stream A-BCD	0.00	~1	0.00	0.00	A	0.01	200.00	4.55	0.01	A
Stream A-B	-	-	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-	-	-
Stream D-A	0.04	~1	9.38	0.04	A	0.01	~1	7.83	0.01	A
Stream D-BC	0.19	~1	13.40	0.16	B	0.10	~1	10.62	0.09	B
Stream C-ABD	0.05	~1	4.55	0.04	A	0.14	~1	5.68	0.08	A
Stream C-D	-	-	-	-	-	-	-	-	-	-
Stream C-A	-	-	-	-	-	-	-	-	-	-
	A1 - 2023 Base + Dev									
Stream B-C	1.80	2.00	301.55	0.92	F	0.28	~1	27.87	0.23	D
Stream B-AD	7.83	30.00	95.82	0.93	F	2.86	10.00	43.56	0.76	E
Stream A-BCD	0.00	~1	0.00	0.00	A	0.01	200.00	4.43	0.01	A
Stream A-B	-	-	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-	-	-
Stream D-A	0.05	~1	9.88	0.04	A	0.01	~1	8.12	0.01	A
Stream D-BC	0.21	~1	15.09	0.18	C	0.11	~1	11.58	0.10	B
Stream C-ABD	0.06	~1	4.60	0.04	A	0.15	~1	5.82	0.08	A
Stream C-D	-	-	-	-	-	-	-	-	-	-
Stream C-A	-	-	-	-	-	-	-	-	-	-
	A1 - Secondary 2023 Base + Dev									
Stream B-C	0.23	~1	40.64	0.19	E	0.19	~1	18.47	0.16	C
Stream B-AD	4.27	16.00	57.74	0.83	F	1.82	5.00	30.86	0.66	D
Stream A-BCD	0.00	~1	0.00	0.00	A	0.01	200.00	4.48	0.01	A
Stream A-B	-	-	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-	-	-
Stream D-A	0.04	~1	9.66	0.04	A	0.01	~1	8.00	0.01	A
Stream D-BC	0.20	~1	14.32	0.17	B	0.11	~1	11.16	0.10	B
Stream C-ABD	0.05	~1	4.58	0.04	A	0.14	~1	5.75	0.08	A
Stream C-D	-	-	-	-	-	-	-	-	-	-
Stream C-A	-	-	-	-	-	-	-	-	-	-
	A1 - Secondary 2023 Base + Dev + Seasonality									
Stream B-C						6.67	19.00	486.83	1.19	F
Stream B-AD						30.20	58.00	348.23	1.19	F
Stream A-BCD						0.02	~1	4.25	0.02	A
Stream A-B						-	-	-	-	-

Stream A-C						-	-	-	-	-
Stream D-A						0.02	~1	9.31	0.02	A
Stream D-BC						0.23	~1	16.58	0.19	C
Stream C-ABD						0.32	~1	5.80	0.14	A
Stream C-D						-	-	-	-	-
Stream C-A						-	-	-	-	-

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:15 - 17:45
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:15 - 17:45
"D9 - Secondary 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D12 - Secondary 2023 Base + Dev, PM" model duration: 16:15 - 17:45
"D13 - Secondary 2023 Base + Dev + Seasonality, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 15:03:08

File summary

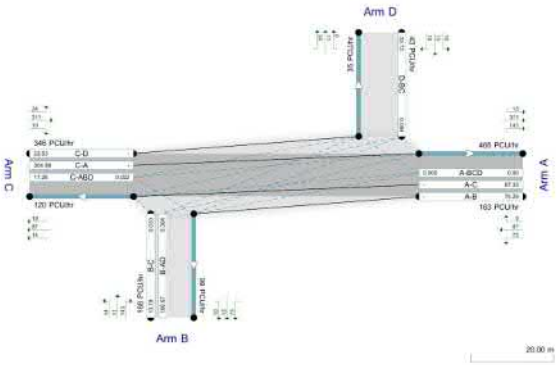
Title	(untitled)
Location	
Site Number	
Date	07/04/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	Rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm D - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base, AM	2017 Base	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	Tollgate	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		22.20	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	A4080		Minor
C	C	A5W		Major
D	D	Lon Graig		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.39		0.00		2.20	160.26	✓	0.00
C	7.39		0.00		2.20	87.90	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				7.00	2.80	2.20	2.20	2.20		0.10	0	10
D	One lane plus flare				7.86	4.58	3.30	3.30	3.09	✓	1.00	11	23

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	666.774	-	-	-	0.243	0.243	0.243	-	0.243	-	-
1	B-AD	476.874	0.082	0.206	-	-	-	0.130	0.295	0.130	0.082	0.206
1	B-C	567.135	0.082	0.206	-	-	-	-	-	-	0.082	0.206
1	C-B	624.866	0.227	0.227	-	-	-	-	-	-	0.227	0.227
1	D-A	573.063	-	-	-	0.209	0.083	0.209	-	0.083	-	-
1	D-BC	523.491	0.142	0.142	0.323	0.226	0.090	0.226	-	0.090	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	216.00	100.000
B	ONE HOUR	✓	226.40	100.000

C	ONE HOUR	✓	459.30	100.000
D	ONE HOUR	✓	58.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	162.62	162.62		
07:45-08:00	B	170.45	170.45		
07:45-08:00	C	345.79	345.79		
07:45-08:00	D	43.67	43.67		
08:00-08:15	A	194.18	194.18		
08:00-08:15	B	203.53	203.53		
08:00-08:15	C	412.90	412.90		
08:00-08:15	D	52.14	52.14		
08:15-08:30	A	237.82	237.82		
08:15-08:30	B	249.27	249.27		
08:15-08:30	C	505.70	505.70		
08:15-08:30	D	63.86	63.86		
08:30-08:45	A	237.82	237.82		
08:30-08:45	B	249.27	249.27		
08:30-08:45	C	505.70	505.70		
08:30-08:45	D	63.86	63.86		
08:45-09:00	A	194.18	194.18		
08:45-09:00	B	203.53	203.53		
08:45-09:00	C	412.90	412.90		
08:45-09:00	D	52.14	52.14		
09:00-09:15	A	162.62	162.62		
09:00-09:15	B	170.45	170.45		
09:00-09:15	C	345.79	345.79		
09:00-09:15	D	43.67	43.67		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	100.000	116.000	0.000
	B	193.100	0.000	18.300	15.000
	C	413.400	14.000	0.000	31.900
	D	14.000	18.000	26.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.46	0.54	0.00
	B	0.85	0.00	0.08	0.07
	C	0.90	0.03	0.00	0.07
	D	0.24	0.31	0.45	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D

From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.08	15.16	0.08	~1	C	16.79	25.19	4.92	11.73	0.05	4.92	11.73
B-AD	0.64	27.89	1.72	5.00	D	190.96	286.43	96.63	20.24	1.07	96.66	20.25
A-BCD	0.00	0.00	0.00	~1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A-B	-	-	-	-	-	91.76	137.64	-	-	-	-	-
A-C	-	-	-	-	-	106.44	159.67	-	-	-	-	-
D-A	0.04	9.10	0.04	~1	A	12.85	19.27	2.72	8.46	0.03	2.72	8.46
D-BC	0.15	12.68	0.17	~1	B	40.38	60.56	11.33	11.23	0.13	11.33	11.23
C-ABD	0.04	4.59	0.05	~1	A	23.56	35.34	3.26	5.53	0.04	3.26	5.53
C-D	-	-	-	-	-	28.50	42.76	-	-	-	-	-
C-A	-	-	-	-	-	369.40	554.09	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	13.78	3.44	13.64	0.00	415.02	0.033	0.00	0.03	8.966	A
B-AD	156.67	39.17	154.14	0.00	397.72	0.394	0.00	0.83	14.636	B
A-BCD	0.00	0.00	0.00	0.00	547.38	0.000	0.00	0.00	0.000	A
A-B	75.29	18.82	75.29	0.00	-	-	-	-	-	-
A-C	87.33	21.83	87.33	0.00	-	-	-	-	-	-
D-A	10.54	2.63	10.45	0.00	464.67	0.023	0.00	0.02	7.923	A
D-BC	33.13	8.28	32.76	0.00	393.76	0.084	0.00	0.09	9.962	A
C-ABD	17.26	4.31	17.15	0.00	801.05	0.022	0.00	0.03	4.592	A
C-D	23.53	5.88	23.53	0.00	-	-	-	-	-	-
C-A	304.99	76.25	304.99	0.00	-	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	16.45	4.11	16.40	0.00	357.59	0.046	0.03	0.05	10.550	B
B-AD	187.08	46.77	185.89	0.00	381.13	0.491	0.83	0.93	18.321	C
A-BCD	0.00	0.00	0.00	0.00	523.58	0.000	0.00	0.00	0.000	A
A-B	89.90	22.47	89.90	0.00	-	-	-	-	-	-
A-C	104.28	26.07	104.28	0.00	-	-	-	-	-	-
D-A	12.59	3.15	12.56	0.00	442.45	0.028	0.02	0.03	8.374	A
D-BC	39.56	9.89	39.44	0.00	368.02	0.107	0.09	0.12	10.952	B
C-ABD	22.50	5.63	22.47	0.00	834.21	0.027	0.03	0.03	4.434	A
C-D	27.97	6.99	27.97	0.00	-	-	-	-	-	-
C-A	362.43	90.61	362.43	0.00	-	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	20.15	5.04	20.01	0.00	262.92	0.077	0.05	0.08	14.813	B
B-AD	229.12	57.28	226.22	0.00	357.53	0.641	0.93	1.66	26.811	D
A-BCD	0.00	0.00	0.00	0.00	491.24	0.000	0.00	0.00	0.000	A
A-B	110.10	27.53	110.10	0.00	-	-	-	-	-	-
A-C	127.72	31.93	127.72	0.00	-	-	-	-	-	-
D-A	15.41	3.85	15.38	0.00	411.80	0.037	0.03	0.04	9.081	A
D-BC	48.44	12.11	48.25	0.00	332.92	0.146	0.12	0.17	12.636	B
C-ABD	30.88	7.72	30.82	0.00	878.91	0.035	0.03	0.05	4.244	A
C-D	34.01	8.50	34.01	0.00	-	-	-	-	-	-
C-A	440.81	110.20	440.81	0.00	-	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	20.15	5.04	20.14	0.00	257.58	0.078	0.08	0.08	15.161	C
B-AD	229.12	57.28	228.88	0.00	357.30	0.641	1.66	1.72	27.889	D
A-BCD	0.00	0.00	0.00	0.00	490.53	0.000	0.00	0.00	0.000	A
A-B	110.10	27.53	110.10	0.00	-	-	-	-	-	-
A-C	127.72	31.93	127.72	0.00	-	-	-	-	-	-
D-A	15.41	3.85	15.41	0.00	411.09	0.038	0.04	0.04	9.097	A
D-BC	48.44	12.11	48.44	0.00	332.29	0.146	0.17	0.17	12.682	B
C-ABD	30.90	7.72	30.90	0.00	878.90	0.035	0.05	0.05	4.247	A
C-D	34.01	8.50	34.01	0.00	-	-	-	-	-	-
C-A	440.79	110.20	440.79	0.00	-	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	16.45	4.11	16.59	0.00	351.11	0.047	0.08	0.05	10.767	B
B-AD	187.08	46.77	189.93	0.00	380.86	0.491	1.72	1.00	19.126	C
A-BCD	0.00	0.00	0.00	0.00	522.51	0.000	0.00	0.00	0.000	A
A-B	89.90	22.47	89.90	0.00	-	-	-	-	-	-
A-C	104.28	26.07	104.28	0.00	-	-	-	-	-	-
D-A	12.59	3.15	12.62	0.00	441.39	0.029	0.04	0.03	8.398	A
D-BC	39.56	9.89	39.74	0.00	367.09	0.108	0.17	0.12	11.003	B
C-ABD	22.53	5.63	22.58	0.00	834.18	0.027	0.05	0.03	4.437	A
C-D	27.97	6.99	27.97	0.00	-	-	-	-	-	-
C-A	362.41	90.60	362.41	0.00	-	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	13.78	3.44	13.84	0.00	409.97	0.034	0.05	0.04	9.090	A
B-AD	156.67	39.17	158.01	0.00	397.47	0.394	1.00	0.87	15.116	C
A-BCD	0.00	0.00	0.00	0.00	546.39	0.000	0.00	0.00	0.000	A
A-B	75.29	18.82	75.29	0.00	-	-	-	-	-	-
A-C	87.33	21.83	87.33	0.00	-	-	-	-	-	-
D-A	10.54	2.63	10.56	0.00	463.61	0.023	0.03	0.02	7.947	A
D-BC	33.13	8.28	33.24	0.00	392.90	0.084	0.12	0.09	10.014	B
C-ABD	17.31	4.33	17.34	0.00	800.99	0.022	0.03	0.03	4.593	A
C-D	23.53	5.88	23.53	0.00	-	-	-	-	-	-
C-A	304.95	76.24	304.95	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.49	0.03	8.966	A	A
B-AD	8.83	0.59	14.636	B	B
A-BCD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.33	0.02	7.923	A	A
D-BC	1.30	0.09	9.962	A	A
C-ABD	0.39	0.03	4.592	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:00-08:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.69	0.05	10.550	B	B
B-AD	13.16	0.88	18.321	C	B
A-BCD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.43	0.03	8.374	A	A
D-BC	1.73	0.12	10.952	B	B
C-ABD	0.51	0.03	4.434	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:15-08:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	1.17	0.08	14.813	B	B
B-AD	22.53	1.50	26.811	D	C
A-BCD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.56	0.04	9.081	A	A
D-BC	2.43	0.16	12.636	B	B
C-ABD	0.72	0.05	4.244	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:30-08:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	1.25	0.08	15.161	C	B
B-AD	25.38	1.69	27.889	D	C
A-BCD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.58	0.04	9.097	A	A
D-BC	2.53	0.17	12.682	B	B
C-ABD	0.72	0.05	4.247	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:45-09:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.77	0.05	10.767	B	B
B-AD	16.17	1.08	19.126	C	B
A-BCD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.46	0.03	8.398	A	A
D-BC	1.90	0.13	11.003	B	B
C-ABD	0.52	0.03	4.437	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (09:00-09:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.54	0.04	9.090	A	A
B-AD	10.56	0.70	15.116	C	B
A-BCD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.36	0.02	7.947	A	A
D-BC	1.44	0.10	10.014	B	B
C-ABD	0.40	0.03	4.593	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.03	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.63	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-BCD	0.00	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.02	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.09	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

C-ABD	0.03	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.05	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.93	0.00	0.00	1.00	1.00			N/A	N/A
A-BCD	0.00	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.03	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.12	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.03	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.08	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	1.66	0.00	0.00	1.00	5.00			N/A	N/A
A-BCD	0.00	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.04	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.17	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.05	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.08	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	1.72	0.00	0.00	0.00	4.00			N/A	N/A
A-BCD	0.00	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.04	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.17	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.05	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.05	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	1.00	0.00	0.00	1.00	2.00			N/A	N/A

A-BCD	0.00	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.03	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.12	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.03	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.04	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.67	0.00	0.00	1.00	1.00			N/A	N/A
A-BCD	0.00	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.02	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.09	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.03	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm D - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base, PM	2017 Base	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	Tolgate	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		15.05	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	A4080		Minor
C	C	A5W		Major
D	D	Lon Graig		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.39		0.00		2.20	160.26	✓	0.00
C	7.39		0.00		2.20	87.90	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				7.00	2.80	2.20	2.20	2.20		0.10	0	10
D	One lane plus flare				7.86	4.58	3.30	3.30	3.09	✓	1.00	11	23

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	666.774	-	-	-	0.243	0.243	0.243	-	0.243	-	-
1	B-AD	476.874	0.082	0.206	-	-	-	0.130	0.295	0.130	0.082	0.206
1	B-C	567.135	0.082	0.206	-	-	-	-	-	-	0.082	0.206
1	C-B	624.866	0.227	0.227	-	-	-	-	-	-	0.227	0.227
1	D-A	554.961	-	-	-	0.202	0.080	0.202	-	0.080	-	-
1	D-BC	529.077	0.144	0.144	0.327	0.229	0.091	0.229	-	0.091	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	388.40	100.000
B	ONE HOUR	✓	186.40	100.000
C	ONE HOUR	✓	240.50	100.000
D	ONE HOUR	✓	34.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	A	292.41	292.41		
16:15-16:30	B	140.33	140.33		
16:15-16:30	C	181.06	181.06		
16:15-16:30	D	25.60	25.60		
16:30-16:45	A	349.16	349.16		
16:30-16:45	B	167.57	167.57		
16:30-16:45	C	216.20	216.20		
16:30-16:45	D	30.57	30.57		
16:45-17:00	A	427.64	427.64		
16:45-17:00	B	205.23	205.23		
16:45-17:00	C	264.80	264.80		
16:45-17:00	D	37.43	37.43		
17:00-17:15	A	427.64	427.64		
17:00-17:15	B	205.23	205.23		
17:00-17:15	C	264.80	264.80		
17:00-17:15	D	37.43	37.43		
17:15-17:30	A	349.16	349.16		
17:15-17:30	B	167.57	167.57		
17:15-17:30	C	216.20	216.20		
17:15-17:30	D	30.57	30.57		
17:30-17:45	A	292.41	292.41		
17:30-17:45	B	140.33	140.33		
17:30-17:45	C	181.06	181.06		
17:30-17:45	D	25.60	25.60		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	148.600	236.800	3.000
	B	130.100	0.000	32.300	24.000
	C	180.900	29.000	0.000	30.600
	D	4.000	16.000	14.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.38	0.61	0.01
	B	0.70	0.00	0.17	0.13
	C	0.75	0.12	0.00	0.13
	D	0.12	0.47	0.41	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.11	12.04	0.12	~1	B	29.64	44.46	7.56	10.20	0.08	7.56	10.20
B-AD	0.48	19.62	0.91	2.00	C	141.40	212.11	55.87	15.81	0.62	55.89	15.81
A-BCD	0.01	4.58	0.01	200.00	A	4.67	7.01	0.54	4.64	0.01	0.54	4.64
A-B	-	-	-	-	-	135.62	203.43	-	-	-	-	-
A-C	-	-	-	-	-	216.11	324.17	-	-	-	-	-
D-A	0.01	7.74	0.01	~1	A	3.67	5.51	0.69	7.47	0.01	0.69	7.47
D-BC	0.09	10.31	0.09	~1	B	27.53	41.29	6.55	9.51	0.07	6.55	9.51
C-ABD	0.07	5.87	0.12	~1	A	37.32	55.97	7.99	8.57	0.09	7.99	8.57
C-D	-	-	-	-	-	26.53	39.80	-	-	-	-	-
C-A	-	-	-	-	-	156.84	235.26	-	-	-	-	-

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	24.32	6.08	24.09	0.00	440.71	0.055	0.00	0.06	8.636	A
B-AD	116.01	29.00	114.39	0.00	395.85	0.293	0.00	0.41	12.720	B
A-BCD	3.45	0.86	3.43	0.00	789.17	0.004	0.00	0.00	4.581	A
A-B	111.41	27.85	111.41	0.00	-	-	-	-	-	-
A-C	177.54	44.39	177.54	0.00	-	-	-	-	-	-
D-A	3.01	0.75	2.99	0.00	497.67	0.006	0.00	0.01	7.276	A
D-BC	22.59	5.65	22.37	0.00	429.26	0.053	0.00	0.05	8.843	A
C-ABD	28.46	7.12	28.22	0.00	663.19	0.043	0.00	0.06	5.668	A
C-D	22.08	5.52	22.08	0.00	-	-	-	-	-	-
C-A	130.52	32.63	130.52	0.00	-	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	29.04	7.26	28.96	0.00	400.61	0.072	0.06	0.08	9.684	A
B-AD	138.53	34.63	137.90	0.00	378.31	0.366	0.41	0.56	14.933	B
A-BCD	4.47	1.12	4.46	0.00	813.12	0.005	0.00	0.01	4.451	A
A-B	132.91	33.23	132.91	0.00	-	-	-	-	-	-
A-C	211.79	52.95	211.79	0.00	-	-	-	-	-	-
D-A	3.60	0.90	3.59	0.00	485.90	0.007	0.01	0.01	7.463	A
D-BC	26.97	6.74	26.91	0.00	409.54	0.066	0.05	0.07	9.407	A
C-ABD	35.93	8.98	35.85	0.00	671.69	0.053	0.06	0.08	5.664	A
C-D	26.08	6.52	26.08	0.00	-	-	-	-	-	-
C-A	154.19	38.55	154.19	0.00	-	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	35.56	8.89	35.41	0.00	336.61	0.106	0.08	0.12	11.945	B
B-AD	169.67	42.42	168.36	0.00	353.08	0.481	0.56	0.89	19.347	C
A-BCD	6.09	1.52	6.08	0.00	846.33	0.007	0.01	0.01	4.284	A
A-B	162.54	40.63	162.54	0.00	-	-	-	-	-	-
A-C	259.01	64.75	259.01	0.00	-	-	-	-	-	-
D-A	4.40	1.10	4.40	0.00	469.79	0.009	0.01	0.01	7.735	A
D-BC	33.03	8.26	32.94	0.00	382.62	0.086	0.07	0.09	10.293	B
C-ABD	47.47	11.87	47.32	0.00	683.91	0.069	0.08	0.12	5.658	A
C-D	31.44	7.86	31.44	0.00	-	-	-	-	-	-
C-A	185.88	46.47	185.88	0.00	-	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	35.56	8.89	35.56	0.00	334.65	0.106	0.12	0.12	12.035	B
B-AD	169.67	42.42	169.60	0.00	352.87	0.481	0.89	0.91	19.622	C
A-BCD	6.09	1.52	6.09	0.00	846.07	0.007	0.01	0.01	4.287	A
A-B	162.54	40.63	162.54	0.00	-	-	-	-	-	-
A-C	259.01	64.75	259.01	0.00	-	-	-	-	-	-
D-A	4.40	1.10	4.40	0.00	469.49	0.009	0.01	0.01	7.740	A
D-BC	33.03	8.26	33.03	0.00	382.33	0.086	0.09	0.09	10.305	B

C-ABD	47.51	11.88	47.51	0.00	683.93	0.069	0.12	0.12	5.661	A
C-D	31.44	7.86	31.44	0.00	-	-	-	-	-	-
C-A	185.85	46.46	185.85	0.00	-	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	29.04	7.26	29.19	0.00	398.16	0.073	0.12	0.08	9.762	A
B-AD	138.53	34.63	139.79	0.00	378.05	0.366	0.91	0.59	15.190	C
A-BCD	4.47	1.12	4.48	0.00	812.71	0.006	0.01	0.01	4.455	A
A-B	132.90	33.23	132.90	0.00	-	-	-	-	-	-
A-C	211.79	52.95	211.79	0.00	-	-	-	-	-	-
D-A	3.60	0.90	3.60	0.00	485.43	0.007	0.01	0.01	7.473	A
D-BC	26.97	6.74	27.06	0.00	409.11	0.066	0.09	0.07	9.424	A
C-ABD	35.98	9.00	36.12	0.00	671.72	0.054	0.12	0.08	5.666	A
C-D	26.07	6.52	26.07	0.00	-	-	-	-	-	-
C-A	154.15	38.54	154.15	0.00	-	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	24.32	6.08	24.40	0.00	438.24	0.055	0.08	0.06	8.700	A
B-AD	116.01	29.00	116.69	0.00	395.54	0.293	0.59	0.42	12.941	B
A-BCD	3.46	0.86	3.46	0.00	788.67	0.004	0.01	0.00	4.584	A
A-B	111.41	27.85	111.41	0.00	-	-	-	-	-	-
A-C	177.54	44.38	177.54	0.00	-	-	-	-	-	-
D-A	3.01	0.75	3.02	0.00	497.10	0.006	0.01	0.01	7.288	A
D-BC	22.59	5.65	22.65	0.00	428.76	0.053	0.07	0.06	8.865	A
C-ABD	28.54	7.13	28.62	0.00	663.19	0.043	0.08	0.06	5.674	A
C-D	22.07	5.52	22.07	0.00	-	-	-	-	-	-
C-A	130.46	32.61	130.46	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.84	0.06	8.636	A	A
B-AD	5.74	0.38	12.720	B	B
A-BCD	0.07	0.00	4.581	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.09	0.01	7.276	A	A
D-BC	0.79	0.05	8.843	A	A
C-ABD	0.91	0.06	5.668	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:30-16:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	1.13	0.08	9.684	A	A
B-AD	8.10	0.54	14.933	B	B
A-BCD	0.09	0.01	4.451	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.11	0.01	7.463	A	A
D-BC	1.02	0.07	9.407	A	A
C-ABD	1.25	0.08	5.664	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:45-17:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	1.69	0.11	11.945	B	B
B-AD	12.53	0.84	19.347	C	B
A-BCD	0.12	0.01	4.284	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.14	0.01	7.735	A	A
D-BC	1.36	0.09	10.293	B	B
C-ABD	1.80	0.12	5.658	A	A

C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:00-17:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	1.76	0.12	12.035	B	B
B-AD	13.51	0.90	19.622	C	B
A-BCD	0.12	0.01	4.287	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.14	0.01	7.740	A	A
D-BC	1.41	0.09	10.305	B	B
C-ABD	1.82	0.12	5.661	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:15-17:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	1.23	0.08	9.762	A	A
B-AD	9.38	0.63	15.190	C	B
A-BCD	0.09	0.01	4.455	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.12	0.01	7.473	A	A
D-BC	1.10	0.07	9.424	A	A
C-ABD	1.27	0.08	5.666	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:30-17:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.91	0.06	8.700	A	A
B-AD	6.61	0.44	12.941	B	B
A-BCD	0.07	0.00	4.584	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.09	0.01	7.288	A	A
D-BC	0.86	0.06	8.865	A	A
C-ABD	0.94	0.06	5.674	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.06	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.41	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-BCD	0.00	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.05	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.06	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
						Percentiles could not be calculated. This may be			

B-C	0.08	~1	~1	~1	~1	because the mean queue is very small or very big.		N/A	N/A
B-AD	0.56	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-BCD	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.07	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.08	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.12	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.89	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-BCD	0.01	0.00	0.00	>199	>199			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.09	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.12	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.12	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.91	0.00	0.00	0.00	2.00			N/A	N/A
A-BCD	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.09	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.12	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.08	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.59	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-BCD	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

D-BC	0.07	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.08	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.06	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.42	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-BCD	0.00	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.06	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.06	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm D - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base, AM	2023 Base	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	Tollgate	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		26.19	D

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	A4080		Minor
C	C	A5W		Major
D	D	Lon Graig		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.39		0.00		2.20	160.28	✓	0.00
C	7.39		0.00		2.20	87.90	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				7.00	2.80	2.20	2.20	2.20		0.10	0	10
D	One lane plus flare				7.86	4.58	3.30	3.30	3.09	✓	1.00	11	23

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	666.774	-	-	-	0.243	0.243	0.243	-	0.243	-	-
1	B-AD	476.874	0.082	0.206	-	-	-	0.130	0.295	0.130	0.082	0.206
1	B-C	567.135	0.082	0.206	-	-	-	-	-	-	0.082	0.206
1	C-B	624.866	0.227	0.227	-	-	-	-	-	-	0.227	0.227
1	D-A	573.145	-	-	-	0.209	0.083	0.209	-	0.083	-	-
1	D-BC	523.466	0.142	0.142	0.323	0.226	0.090	0.226	-	0.090	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	229.00	100.000
B	ONE HOUR	✓	240.00	100.000
C	ONE HOUR	✓	487.00	100.000
D	ONE HOUR	✓	62.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	172.40	172.40		
07:45-08:00	B	180.68	180.68		
07:45-08:00	C	366.64	366.64		
07:45-08:00	D	46.68	46.68		

08:00-08:15	A	205.87	205.87		
08:00-08:15	B	215.76	215.76		
08:00-08:15	C	437.80	437.80		
08:00-08:15	D	55.74	55.74		
08:15-08:30	A	252.13	252.13		
08:15-08:30	B	264.24	264.24		
08:15-08:30	C	536.20	536.20		
08:15-08:30	D	68.26	68.26		
08:30-08:45	A	252.13	252.13		
08:30-08:45	B	264.24	264.24		
08:30-08:45	C	536.20	536.20		
08:30-08:45	D	68.26	68.26		
08:45-09:00	A	205.87	205.87		
08:45-09:00	B	215.76	215.76		
08:45-09:00	C	437.80	437.80		
08:45-09:00	D	55.74	55.74		
09:00-09:15	A	172.40	172.40		
09:00-09:15	B	180.68	180.68		
09:00-09:15	C	366.64	366.64		
09:00-09:15	D	46.68	46.68		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	106.000	123.000	0.000
	B	205.000	0.000	19.000	16.000
	C	438.000	15.000	0.000	34.000
	D	15.000	19.000	28.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.46	0.54	0.00
	B	0.85	0.00	0.08	0.07
	C	0.90	0.03	0.00	0.07
	D	0.24	0.31	0.45	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.10	18.28	0.10	~1	C	17.43	26.15	5.75	13.20	0.06	5.75	13.20

B-AD	0.70	33.51	2.17	7.00	D	202.79	304.19	115.84	22.85	1.29	115.88	22.86
A-BCD	0.00	0.00	0.00	~1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A-B	-	-	-	-	-	97.27	145.90	-	-	-	-	-
A-C	-	-	-	-	-	112.87	169.30	-	-	-	-	-
D-A	0.04	9.38	0.04	~1	A	13.76	20.65	2.98	8.66	0.03	2.98	8.66
D-BC	0.16	13.40	0.19	~1	B	43.13	64.69	12.62	11.71	0.14	12.63	11.71
C-ABD	0.04	4.55	0.05	~1	A	26.07	39.11	3.63	5.57	0.04	3.63	5.57
C-D	-	-	-	-	-	30.31	45.47	-	-	-	-	-
C-A	-	-	-	-	-	390.50	585.74	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	14.30	3.58	14.16	0.00	399.05	0.036	0.00	0.04	9.350	A
B-AD	166.38	41.60	163.53	0.00	392.68	0.424	0.00	0.71	15.527	C
A-BCD	0.00	0.00	0.00	0.00	540.14	0.000	0.00	0.00	0.000	A
A-B	79.80	19.95	79.80	0.00	-	-	-	-	-	-
A-C	92.60	23.15	92.60	0.00	-	-	-	-	-	-
D-A	11.29	2.82	11.19	0.00	457.98	0.025	0.00	0.03	8.055	A
D-BC	35.38	8.85	34.99	0.00	385.91	0.092	0.00	0.10	10.247	B
C-ABD	18.99	4.75	18.88	0.00	811.31	0.023	0.00	0.03	4.543	A
C-D	25.04	6.26	25.04	0.00	-	-	-	-	-	-
C-A	322.60	80.65	322.60	0.00	-	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	17.08	4.27	17.01	0.00	333.87	0.051	0.04	0.05	11.358	B
B-AD	198.67	49.67	197.21	0.00	374.92	0.530	0.71	1.08	20.081	C
A-BCD	0.00	0.00	0.00	0.00	514.86	0.000	0.00	0.00	0.000	A
A-B	95.29	23.82	95.29	0.00	-	-	-	-	-	-
A-C	110.57	27.64	110.57	0.00	-	-	-	-	-	-
D-A	13.48	3.37	13.46	0.00	434.24	0.031	0.03	0.03	8.555	A
D-BC	42.25	10.56	42.12	0.00	358.58	0.118	0.10	0.13	11.370	B
C-ABD	24.87	6.22	24.83	0.00	846.21	0.029	0.03	0.04	4.382	A
C-D	29.75	7.44	29.75	0.00	-	-	-	-	-	-
C-A	383.19	95.80	383.19	0.00	-	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	20.92	5.23	20.73	0.00	225.58	0.093	0.05	0.10	17.559	C
B-AD	243.33	60.83	239.38	0.00	349.60	0.696	1.08	2.07	31.539	D
A-BCD	0.00	0.00	0.00	0.00	480.51	0.000	0.00	0.00	0.000	A
A-B	116.71	29.18	116.71	0.00	-	-	-	-	-	-
A-C	135.43	33.86	135.43	0.00	-	-	-	-	-	-
D-A	16.52	4.13	16.47	0.00	401.37	0.041	0.03	0.04	9.352	A
D-BC	51.75	12.94	51.52	0.00	321.31	0.161	0.13	0.19	13.333	B
C-ABD	34.30	8.57	34.24	0.00	893.10	0.038	0.04	0.05	4.191	A
C-D	36.15	9.04	36.15	0.00	-	-	-	-	-	-
C-A	465.75	116.44	465.75	0.00	-	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	20.92	5.23	20.90	0.00	217.85	0.096	0.10	0.10	18.276	C
B-AD	243.33	60.83	242.91	0.00	349.28	0.697	2.07	2.17	33.510	D
A-BCD	0.00	0.00	0.00	0.00	479.54	0.000	0.00	0.00	0.000	A
A-B	116.71	29.18	116.71	0.00	-	-	-	-	-	-
A-C	135.43	33.86	135.43	0.00	-	-	-	-	-	-
D-A	16.52	4.13	16.51	0.00	400.42	0.041	0.04	0.04	9.376	A
D-BC	51.75	12.94	51.74	0.00	320.46	0.161	0.19	0.19	13.396	B
C-ABD	34.32	8.58	34.32	0.00	893.09	0.038	0.05	0.05	4.192	A
C-D	36.15	9.04	36.15	0.00	-	-	-	-	-	-
C-A	465.72	116.43	465.72	0.00	-	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	17.08	4.27	17.27	0.00	324.63	0.053	0.10	0.06	11.719	B
B-AD	198.67	49.67	202.63	0.00	374.56	0.530	2.17	1.18	21.388	C
A-BCD	0.00	0.00	0.00	0.00	513.43	0.000	0.00	0.00	0.000	A
A-B	95.29	23.82	95.29	0.00	-	-	-	-	-	-
A-C	110.57	27.64	110.57	0.00	-	-	-	-	-	-
D-A	13.48	3.37	13.53	0.00	432.85	0.031	0.04	0.03	8.585	A
D-BC	42.25	10.56	42.47	0.00	357.33	0.118	0.19	0.14	11.441	B
C-ABD	24.90	6.22	24.96	0.00	846.19	0.029	0.05	0.04	4.383	A
C-D	29.74	7.44	29.74	0.00	-	-	-	-	-	-
C-A	383.16	95.79	383.16	0.00	-	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	14.30	3.58	14.38	0.00	392.77	0.036	0.06	0.04	9.517	A
B-AD	166.38	41.60	168.07	0.00	392.38	0.424	1.18	0.76	16.168	C
A-BCD	0.00	0.00	0.00	0.00	538.98	0.000	0.00	0.00	0.000	A
A-B	79.80	19.95	79.80	0.00	-	-	-	-	-	-
A-C	92.60	23.15	92.60	0.00	-	-	-	-	-	-
D-A	11.29	2.82	11.32	0.00	456.75	0.025	0.03	0.03	8.082	A
D-BC	35.38	8.85	35.52	0.00	384.90	0.092	0.14	0.10	10.309	B
C-ABD	19.05	4.76	19.09	0.00	811.26	0.023	0.04	0.03	4.546	A
C-D	25.04	6.26	25.04	0.00	-	-	-	-	-	-
C-A	322.55	80.64	322.55	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.53	0.04	9.350	A	A
B-AD	9.91	0.66	15.527	C	B
A-BCD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.36	0.02	8.055	A	A
D-BC	1.43	0.10	10.247	B	B
C-ABD	0.43	0.03	4.543	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:00-08:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.77	0.05	11.358	B	B
B-AD	15.17	1.01	20.081	C	C
A-BCD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.47	0.03	8.555	A	A
D-BC	1.92	0.13	11.370	B	B
C-ABD	0.57	0.04	4.382	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:15-08:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	1.43	0.10	17.559	C	B
B-AD	27.55	1.84	31.539	D	C
A-BCD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.62	0.04	9.352	A	A
D-BC	2.73	0.18	13.333	B	B
C-ABD	0.80	0.05	4.191	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:30-08:45)

	Queueing Total Delay (PCU-	Queueing Rate Of Delay (PCU-	Average Delay Per Arriving Vehicle	Unsignalised Level Of	Signalised Level Of

Stream	min)	min/min)	(s)	Service	Service
B-C	1.55	0.10	18.276	C	B
B-AD	31.92	2.13	33.510	D	C
A-BCD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.64	0.04	9.376	A	A
D-BC	2.85	0.19	13.396	B	B
C-ABD	0.81	0.05	4.192	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:45-09:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.88	0.06	11.719	B	B
B-AD	19.24	1.28	21.388	C	C
A-BCD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.50	0.03	8.585	A	A
D-BC	2.11	0.14	11.441	B	B
C-ABD	0.58	0.04	4.383	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (09:00-09:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.59	0.04	9.517	A	A
B-AD	12.05	0.80	16.168	C	B
A-BCD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.39	0.03	8.082	A	A
D-BC	1.58	0.11	10.309	B	B
C-ABD	0.44	0.03	4.546	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.04	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.71	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-BCD	0.00	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.03	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.10	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.03	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.05	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	1.08	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-BCD	0.00	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very		N/A	N/A

						big.			
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.03	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.13	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.04	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.10	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	2.07	0.00	0.00	2.00	7.00			N/A	N/A
A-BCD	0.00	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.04	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.19	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.05	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.10	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	2.17	0.00	0.00	1.00	6.00			N/A	N/A
A-BCD	0.00	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.04	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.19	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.05	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.06	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	1.18	0.00	0.00	2.00	3.00			N/A	N/A
A-BCD	0.00	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.03	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.14	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.04	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.04	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.76	0.00	0.00	1.00	2.00			N/A	N/A
A-BCD	0.00	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.03	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.10	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.03	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm D - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base, PM	2023 Base	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	Tolgate	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		16.28	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	A4080		Minor
C	C	A5W		Major
D	D	Lon Graig		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)

A	7.39		0.00		2.20	160.26	✓	0.00
C	7.39		0.00		2.20	87.90	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				7.00	2.80	2.20	2.20	2.20		0.10	0	10
D	One lane plus flare				7.86	4.58	3.30	3.30	3.09	✓	1.00	11	23

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	666.774	-	-	-	0.243	0.243	0.243	-	0.243	-	-	
1	B-AD	476.874	0.082	0.206	-	-	-	0.130	0.295	0.130	0.082	0.206	
1	B-C	567.135	0.082	0.206	-	-	-	-	-	-	0.082	0.206	
1	C-B	624.866	0.227	0.227	-	-	-	-	-	-	0.227	0.227	
1	D-A	554.723	-	-	-	0.202	0.080	0.202	-	0.080	-	-	
1	D-BC	529.150	0.144	0.144	0.327	0.229	0.091	0.229	-	0.091	-	-	

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	410.20	100.000
B	ONE HOUR	✓	196.00	100.000
C	ONE HOUR	✓	254.00	100.000
D	ONE HOUR	✓	36.20	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	A	308.82	308.82		
16:15-16:30	B	147.56	147.56		
16:15-16:30	C	191.22	191.22		
16:15-16:30	D	27.25	27.25		
16:30-16:45	A	368.76	368.76		
16:30-16:45	B	176.20	176.20		
16:30-16:45	C	228.34	228.34		
16:30-16:45	D	32.54	32.54		
16:45-17:00	A	451.64	451.64		
16:45-17:00	B	215.80	215.80		
16:45-17:00	C	279.66	279.66		
16:45-17:00	D	39.86	39.86		
17:00-17:15	A	451.64	451.64		

17:00-17:15	B	215.80	215.80		
17:00-17:15	C	279.66	279.66		
17:00-17:15	D	39.86	39.86		
17:15-17:30	A	368.76	368.76		
17:15-17:30	B	176.20	176.20		
17:15-17:30	C	228.34	228.34		
17:15-17:30	D	32.54	32.54		
17:30-17:45	A	308.82	308.82		
17:30-17:45	B	147.56	147.56		
17:30-17:45	C	191.22	191.22		
17:30-17:45	D	27.25	27.25		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	157.000	250.000	3.200
	B	137.000	0.000	34.000	25.000
	C	191.000	31.000	0.000	32.000
	D	4.200	17.000	15.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.38	0.61	0.01
	B	0.70	0.00	0.17	0.13
	C	0.75	0.12	0.00	0.13
	D	0.12	0.47	0.41	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.12	13.07	0.13	~1	B	31.20	46.80	8.41	10.79	0.09	8.41	10.79
B-AD	0.52	21.59	1.05	2.00	C	148.65	222.98	62.85	16.91	0.70	62.87	16.92
A-BCD	0.01	4.55	0.01	200.00	A	5.12	7.69	0.59	4.61	0.01	0.59	4.61
A-B	-	-	-	-	-	143.22	214.83	-	-	-	-	-
A-C	-	-	-	-	-	228.06	342.09	-	-	-	-	-
D-A	0.01	7.83	0.01	~1	A	3.85	5.78	0.73	7.55	0.01	0.73	7.55
D-BC	0.09	10.62	0.10	~1	B	29.36	44.05	7.15	9.74	0.08	7.15	9.74
C-ABD	0.08	5.68	0.14	~1	A	40.87	61.01	8.98	8.83	0.10	8.98	8.83
C-D	-	-	-	-	-	27.61	41.41	-	-	-	-	-
C-A	-	-	-	-	-	164.79	247.19	-	-	-	-	-

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	25.60	6.40	25.35	0.00	430.81	0.059	0.00	0.06	8.873	A
B-AD	121.96	30.49	120.19	0.00	390.89	0.312	0.00	0.44	13.215	B
A-BCD	3.76	0.94	3.74	0.00	796.35	0.005	0.00	0.00	4.541	A
A-B	117.68	29.42	117.68	0.00	-	-	-	-	-	-
A-C	187.38	46.85	187.38	0.00	-	-	-	-	-	-
D-A	3.16	0.79	3.14	0.00	494.22	0.006	0.00	0.01	7.330	A
D-BC	24.09	6.02	23.85	0.00	423.84	0.057	0.00	0.06	8.993	A
C-ABD	30.89	7.72	30.61	0.00	665.38	0.046	0.00	0.07	5.670	A
C-D	23.01	5.75	23.01	0.00	-	-	-	-	-	-
C-A	137.33	34.33	137.33	0.00	-	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	30.57	7.64	30.48	0.00	386.60	0.079	0.06	0.08	10.107	B
B-AD	145.63	36.41	144.91	0.00	372.13	0.391	0.44	0.63	15.789	C
A-BCD	4.89	1.22	4.89	0.00	821.62	0.006	0.00	0.01	4.407	A
A-B	140.36	35.09	140.36	0.00	-	-	-	-	-	-
A-C	223.51	55.88	223.51	0.00	-	-	-	-	-	-
D-A	3.78	0.94	3.77	0.00	481.73	0.008	0.01	0.01	7.531	A
D-BC	28.77	7.19	28.70	0.00	403.02	0.071	0.06	0.08	9.616	A
C-ABD	39.12	9.78	39.02	0.00	674.41	0.058	0.07	0.09	5.666	A
C-D	27.15	6.79	27.15	0.00	-	-	-	-	-	-
C-A	162.07	40.52	162.07	0.00	-	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	37.43	9.36	37.24	0.00	315.46	0.119	0.08	0.13	12.930	B
B-AD	178.37	44.59	176.78	0.00	345.04	0.517	0.63	1.02	21.187	C
A-BCD	6.71	1.68	6.70	0.00	856.59	0.008	0.01	0.01	4.235	A
A-B	171.63	42.91	171.63	0.00	-	-	-	-	-	-
A-C	273.30	68.33	273.30	0.00	-	-	-	-	-	-
D-A	4.62	1.16	4.62	0.00	464.62	0.010	0.01	0.01	7.825	A
D-BC	35.23	8.81	35.13	0.00	374.59	0.094	0.08	0.10	10.601	B
C-ABD	51.92	12.98	51.75	0.00	687.40	0.076	0.09	0.14	5.667	A
C-D	32.68	8.17	32.68	0.00	-	-	-	-	-	-
C-A	195.06	48.77	195.06	0.00	-	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	37.43	9.36	37.43	0.00	312.93	0.120	0.13	0.13	13.066	B
B-AD	178.37	44.59	178.27	0.00	344.77	0.517	1.02	1.05	21.589	C
A-BCD	6.71	1.68	6.71	0.00	856.29	0.008	0.01	0.01	4.237	A
A-B	171.63	42.91	171.63	0.00	-	-	-	-	-	-
A-C	273.30	68.32	273.30	0.00	-	-	-	-	-	-
D-A	4.62	1.16	4.62	0.00	464.26	0.010	0.01	0.01	7.832	A
D-BC	35.23	8.81	35.23	0.00	374.25	0.094	0.10	0.10	10.618	B
C-ABD	51.97	12.99	51.96	0.00	687.43	0.076	0.14	0.14	5.670	A
C-D	32.67	8.17	32.67	0.00	-	-	-	-	-	-
C-A	195.02	48.75	195.02	0.00	-	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	30.57	7.64	30.75	0.00	383.50	0.080	0.13	0.09	10.210	B
B-AD	145.63	36.41	147.17	0.00	371.81	0.392	1.05	0.66	16.133	C
A-BCD	4.90	1.22	4.91	0.00	821.14	0.006	0.01	0.01	4.410	A
A-B	140.36	35.09	140.36	0.00	-	-	-	-	-	-
A-C	223.50	55.88	223.50	0.00	-	-	-	-	-	-
D-A	3.78	0.94	3.78	0.00	481.18	0.008	0.01	0.01	7.540	A
D-BC	28.77	7.19	28.87	0.00	402.50	0.071	0.10	0.08	9.637	A
C-ABD	39.18	9.80	39.35	0.00	674.46	0.058	0.14	0.10	5.673	A

C-D	27.14	6.79	27.14	0.00	-	-	-	-	-	-
C-A	162.01	40.50	162.01	0.00	-	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	25.60	6.40	25.69	0.00	427.92	0.060	0.09	0.06	8.953	A
B-AD	121.96	30.49	122.75	0.00	390.54	0.312	0.66	0.46	13.483	B
A-BCD	3.77	0.94	3.78	0.00	795.80	0.005	0.01	0.01	4.546	A
A-B	117.67	29.42	117.67	0.00	-	-	-	-	-	-
A-C	187.37	46.84	187.37	0.00	-	-	-	-	-	-
D-A	3.16	0.79	3.17	0.00	493.58	0.006	0.01	0.01	7.342	A
D-BC	24.09	6.02	24.16	0.00	423.27	0.057	0.08	0.06	9.021	A
C-ABD	30.97	7.74	31.07	0.00	665.39	0.047	0.10	0.07	5.679	A
C-D	23.00	5.75	23.00	0.00	-	-	-	-	-	-
C-A	137.25	34.31	137.25	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.90	0.06	8.873	A	A
B-AD	6.26	0.42	13.215	B	B
A-BCD	0.07	0.00	4.541	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.09	0.01	7.330	A	A
D-BC	0.86	0.06	8.993	A	A
C-ABD	1.01	0.07	5.670	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:30-16:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	1.24	0.08	10.107	B	B
B-AD	8.96	0.60	15.789	C	B
A-BCD	0.09	0.01	4.407	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.12	0.01	7.531	A	A
D-BC	1.11	0.07	9.616	A	A
C-ABD	1.40	0.09	5.666	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:45-17:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	1.92	0.13	12.930	B	B
B-AD	14.30	0.95	21.187	C	C
A-BCD	0.13	0.01	4.235	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.15	0.01	7.825	A	A
D-BC	1.50	0.10	10.601	B	B
C-ABD	2.04	0.14	5.667	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:00-17:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	2.01	0.13	13.066	B	B
B-AD	15.56	1.04	21.589	C	C
A-BCD	0.13	0.01	4.237	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.15	0.01	7.832	A	A
D-BC	1.54	0.10	10.618	B	B
C-ABD	2.06	0.14	5.670	A	A
C-D	-	-	-	-	-

C-A	-	-	-	-	-

Queueing Delay results: (17:15-17:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	1.36	0.09	10.210	B	B
B-AD	10.51	0.70	16.133	C	B
A-BCD	0.10	0.01	4.410	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.12	0.01	7.540	A	A
D-BC	1.20	0.08	9.637	A	A
C-ABD	1.43	0.10	5.673	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:30-17:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.99	0.07	8.953	A	A
B-AD	7.28	0.48	13.483	B	B
A-BCD	0.07	0.00	4.546	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.10	0.01	7.342	A	A
D-BC	0.94	0.06	9.021	A	A
C-ABD	1.05	0.07	5.679	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.06	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.44	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-BCD	0.00	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.06	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.07	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.08	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.63	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-BCD	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.08	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.09	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.13	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	1.02	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-BCD	0.01	0.00	0.00	>199	>199			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.10	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.14	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.13	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	1.05	0.00	0.00	0.00	2.00			N/A	N/A
A-BCD	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.10	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.14	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.09	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.66	0.00	0.00	0.00	1.00			N/A	N/A
A-BCD	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.08	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.10	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.06	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.46	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
						Percentiles could not be calculated. This may be			

A-BCD	0.01	~1	~1	~1	~1	because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.06	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.07	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm D - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base + Dev, AM	2023 Base + Dev	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	Tollgate	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		86.22	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	A4080		Minor
C	C	A5W		Major
D	D	Lon Graig		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.39		0.00		2.20	160.26	✓	0.00
C	7.39		0.00		2.20	87.90	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				7.00	2.80	2.20	2.20	2.20		0.10	0	10
D	One lane plus flare				7.86	4.58	3.30	3.30	3.09	✓	1.00	11	23

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	666.774	-	-	-	0.243	0.243	0.243	-	0.243	-	-
1	B-AD	476.874	0.082	0.206	-	-	-	0.130	0.295	0.130	0.082	0.206
1	B-C	567.135	0.082	0.206	-	-	-	-	-	-	0.082	0.206
1	C-B	624.866	0.227	0.227	-	-	-	-	-	-	0.227	0.227
1	D-A	573.145	-	-	-	0.209	0.083	0.209	-	0.083	-	-
1	D-BC	523.466	0.142	0.142	0.323	0.226	0.090	0.226	-	0.090	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	295.00	100.000
B	ONE HOUR	✓	305.00	100.000
C	ONE HOUR	✓	487.00	100.000
D	ONE HOUR	✓	62.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	222.09	222.09		
07:45-08:00	B	229.62	229.62		
07:45-08:00	C	366.64	366.64		
07:45-08:00	D	46.68	46.68		
08:00-08:15	A	265.20	265.20		
08:00-08:15	B	274.19	274.19		
08:00-08:15	C	437.80	437.80		
08:00-08:15	D	55.74	55.74		
08:15-08:30	A	324.80	324.80		
08:15-08:30	B	335.81	335.81		
08:15-08:30	C	536.20	536.20		
08:15-08:30	D	68.26	68.26		
08:30-08:45	A	324.80	324.80		
08:30-08:45	B	335.81	335.81		
08:30-08:45	C	536.20	536.20		
08:30-08:45	D	68.26	68.26		
08:45-09:00	A	265.20	265.20		
08:45-09:00	B	274.19	274.19		
08:45-09:00	C	437.80	437.80		

08:45-09:00	D	55.74	55.74		
09:00-09:15	A	222.09	222.09		
09:00-09:15	B	229.62	229.62		
09:00-09:15	C	366.64	366.64		
09:00-09:15	D	46.68	46.68		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	172.000	123.000	0.000
	B	270.000	0.000	19.000	16.000
	C	438.000	15.000	0.000	34.000
	D	15.000	19.000	28.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.58	0.42	0.00
	B	0.89	0.00	0.06	0.05
	C	0.90	0.03	0.00	0.07
	D	0.24	0.31	0.45	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.92	301.55	1.80	2.00	F	17.43	26.15	30.44	69.83	0.34	30.44	69.83
B-AD	0.93	95.82	7.83	30.00	F	262.44	393.66	298.23	45.45	3.31	298.36	45.48
A-BCD	0.00	0.00	0.00	~1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A-B	-	-	-	-	-	157.83	236.75	-	-	-	-	-
A-C	-	-	-	-	-	112.87	169.30	-	-	-	-	-
D-A	0.04	9.88	0.05	~1	A	13.76	20.65	3.10	9.00	0.03	3.10	9.00
D-BC	0.18	15.09	0.21	~1	C	43.13	64.69	13.77	12.77	0.15	13.77	12.77
C-ABD	0.04	4.60	0.06	~1	A	26.42	39.63	3.75	5.68	0.04	3.75	5.68
C-D	-	-	-	-	-	30.29	45.43	-	-	-	-	-
C-A	-	-	-	-	-	390.18	585.26	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	14.30	3.58	14.12	0.00	324.68	0.044	0.00	0.05	11.587	B
B-AD	215.32	53.83	210.55	0.00	387.36	0.556	0.00	1.19	19.873	C
A-BCD	0.00	0.00	0.00	0.00	528.26	0.000	0.00	0.00	0.000	A
A-B	129.49	32.37	129.49	0.00	-	-	-	-	-	-
A-C	92.60	23.15	92.60	0.00	-	-	-	-	-	-
D-A	11.29	2.82	11.19	0.00	447.44	0.025	0.00	0.03	8.250	A
D-BC	35.38	8.85	34.96	0.00	367.76	0.096	0.00	0.11	10.805	B
C-ABD	19.15	4.79	19.04	0.00	802.17	0.024	0.00	0.03	4.597	A
C-D	25.03	6.26	25.03	0.00	-	-	-	-	-	-
C-A	322.45	80.61	322.45	0.00	-	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	17.08	4.27	16.94	0.00	224.11	0.076	0.05	0.08	17.363	C
B-AD	257.11	64.28	253.46	0.00	367.95	0.699	1.19	2.10	30.453	D
A-BCD	0.00	0.00	0.00	0.00	500.21	0.000	0.00	0.00	0.000	A
A-B	154.62	38.66	154.62	0.00	-	-	-	-	-	-
A-C	110.57	27.64	110.57	0.00	-	-	-	-	-	-
D-A	13.48	3.37	13.46	0.00	421.06	0.032	0.03	0.03	8.832	A
D-BC	42.25	10.56	42.11	0.00	336.48	0.126	0.11	0.14	12.222	B
C-ABD	25.16	6.29	25.12	0.00	835.76	0.030	0.03	0.04	4.440	A
C-D	29.72	7.43	29.72	0.00	-	-	-	-	-	-
C-A	382.92	95.73	382.92	0.00	-	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	20.92	5.23	19.22	0.00	56.45	0.371	0.08	0.50	93.285	F
B-AD	314.89	78.72	298.57	0.00	339.70	0.927	2.10	6.18	69.086	F
A-BCD	0.00	0.00	0.00	0.00	462.15	0.000	0.00	0.00	0.000	A
A-B	189.38	47.34	189.38	0.00	-	-	-	-	-	-
A-C	135.43	33.86	135.43	0.00	-	-	-	-	-	-
D-A	16.52	4.13	16.47	0.00	384.29	0.043	0.03	0.04	9.786	A
D-BC	51.75	12.94	51.48	0.00	293.85	0.176	0.14	0.21	14.837	B
C-ABD	34.88	8.72	34.81	0.00	881.05	0.040	0.04	0.06	4.254	A
C-D	36.11	9.03	36.11	0.00	-	-	-	-	-	-
C-A	465.21	116.30	465.21	0.00	-	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	20.92	5.23	15.73	0.00	22.81	0.917	0.50	1.80	301.548	F
B-AD	314.89	78.72	308.32	0.00	337.64	0.933	6.18	7.83	95.825	F
A-BCD	0.00	0.00	0.00	0.00	458.18	0.000	0.00	0.00	0.000	A
A-B	189.38	47.34	189.38	0.00	-	-	-	-	-	-
A-C	135.43	33.86	135.43	0.00	-	-	-	-	-	-
D-A	16.52	4.13	16.51	0.00	380.70	0.043	0.04	0.05	9.884	A
D-BC	51.75	12.94	51.73	0.00	290.28	0.178	0.21	0.21	15.088	C
C-ABD	34.90	8.73	34.90	0.00	881.03	0.040	0.06	0.06	4.256	A
C-D	36.11	9.03	36.11	0.00	-	-	-	-	-	-
C-A	465.19	116.30	465.19	0.00	-	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	17.08	4.27	23.83	0.00	170.17	0.100	1.80	0.11	25.644	D
B-AD	257.11	64.28	277.44	0.00	362.71	0.709	7.83	2.74	48.562	E
A-BCD	0.00	0.00	0.00	0.00	493.75	0.000	0.00	0.00	0.000	A
A-B	154.62	38.66	154.62	0.00	-	-	-	-	-	-
A-C	110.57	27.64	110.57	0.00	-	-	-	-	-	-
D-A	13.48	3.37	13.53	0.00	415.34	0.032	0.05	0.03	8.960	A
D-BC	42.25	10.56	42.51	0.00	330.68	0.128	0.21	0.15	12.503	B
C-ABD	25.19	6.30	25.26	0.00	835.72	0.030	0.06	0.04	4.443	A
C-D	29.72	7.43	29.72	0.00	-	-	-	-	-	-
C-A	382.89	95.72	382.89	0.00	-	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	14.30	3.58	14.57	0.00	307.29	0.047	0.11	0.05	12.310	B

B-AD	215.32	53.83	221.02	0.00	386.76	0.557	2.74	1.32	22.397	C
A-BCD	0.00	0.00	0.00	0.00	525.58	0.000	0.00	0.00	0.000	A
A-B	129.49	32.37	129.49	0.00	-	-	-	-	-	-
A-C	92.60	23.15	92.60	0.00	-	-	-	-	-	-
D-A	11.29	2.82	11.32	0.00	444.89	0.025	0.03	0.03	8.305	A
D-BC	35.38	8.85	35.54	0.00	365.37	0.097	0.15	0.11	10.921	B
C-ABD	19.22	4.80	19.25	0.00	802.11	0.024	0.04	0.03	4.598	A
C-D	25.03	6.26	25.03	0.00	-	-	-	-	-	-
C-A	322.40	80.60	322.40	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.65	0.04	11.587	B	B
B-AD	16.07	1.07	19.873	C	B
A-BCD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.37	0.02	8.250	A	A
D-BC	1.51	0.10	10.805	B	B
C-ABD	0.44	0.03	4.597	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:00-08:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	1.16	0.08	17.363	C	B
B-AD	28.26	1.88	30.453	D	C
A-BCD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.48	0.03	8.832	A	A
D-BC	2.06	0.14	12.222	B	B
C-ABD	0.59	0.04	4.440	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:15-08:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	6.20	0.41	93.285	F	F
B-AD	70.29	4.69	69.086	F	E
A-BCD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.65	0.04	9.786	A	A
D-BC	3.02	0.20	14.837	B	B
C-ABD	0.83	0.06	4.254	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:30-08:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	18.89	1.26	301.548	F	F
B-AD	106.34	7.09	95.825	F	F
A-BCD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.67	0.04	9.884	A	A
D-BC	3.19	0.21	15.088	C	B
C-ABD	0.84	0.06	4.256	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:45-09:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	2.77	0.18	25.644	D	C
B-AD	55.44	3.70	48.562	E	D

A-BCD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.52	0.03	8.960	A	A
D-BC	2.32	0.15	12.503	B	B
C-ABD	0.60	0.04	4.443	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (09:00-09:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.78	0.05	12.310	B	B
B-AD	21.83	1.46	22.397	C	C
A-BCD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.40	0.03	8.305	A	A
D-BC	1.68	0.11	10.921	B	B
C-ABD	0.45	0.03	4.598	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.05	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	1.19	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-BCD	0.00	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.03	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.11	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.03	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.08	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	2.10	0.00	0.00	4.00	5.00			N/A	N/A
A-BCD	0.00	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.03	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.14	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.04	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.50	0.00	0.00	0.00	1.00			N/A	N/A
B-AD	6.18	0.00	2.00	15.00	22.00			N/A	N/A

A-BCD	0.00	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.04	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.21	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.06	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	1.80	0.00	1.00	2.00	2.00			N/A	N/A
B-AD	7.83	0.00	1.00	20.00	30.00			N/A	N/A
A-BCD	0.00	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.05	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.21	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.06	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.11	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	2.74	0.00	0.00	5.00	10.00			N/A	N/A
A-BCD	0.00	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.03	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.15	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.04	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.05	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	1.32	0.00	0.00	1.00	4.00			N/A	N/A
A-BCD	0.00	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.03	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.11	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.03	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm D - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base + Dev, PM	2023 Base + Dev	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	Tollgate	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		33.08	D

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	A4080		Minor
C	C	A5W		Major
D	D	Lon Graig		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.39		0.00		2.20	160.26	✓	0.00
C	7.39		0.00		2.20	87.90	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				7.00	2.80	2.20	2.20	2.20		0.10	0	10
D	One lane plus flare				7.86	4.58	3.30	3.30	3.09	✓	1.00	11	23

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C

1	A-D	666.774	-	-	-	0.243	0.243	0.243	-	0.243	-	-
1	B-AD	476.874	0.082	0.206	-	-	-	0.130	0.295	0.130	0.082	0.206
1	B-C	567.135	0.082	0.206	-	-	-	-	-	-	0.082	0.206
1	C-B	624.866	0.227	0.227	-	-	-	-	-	-	0.227	0.227
1	D-A	554.961	-	-	-	0.202	0.080	0.202	-	0.080	-	-
1	D-BC	529.077	0.144	0.144	0.327	0.229	0.091	0.229	-	0.091	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	476.10	100.000
B	ONE HOUR	✓	261.90	100.000
C	ONE HOUR	✓	256.00	100.000
D	ONE HOUR	✓	35.70	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	A	358.43	358.43		
16:15-16:30	B	197.17	197.17		
16:15-16:30	C	192.73	192.73		
16:15-16:30	D	26.88	26.88		
16:30-16:45	A	428.00	428.00		
16:30-16:45	B	235.44	235.44		
16:30-16:45	C	230.14	230.14		
16:30-16:45	D	32.09	32.09		
16:45-17:00	A	524.20	524.20		
16:45-17:00	B	288.36	288.36		
16:45-17:00	C	281.86	281.86		
16:45-17:00	D	39.31	39.31		
17:00-17:15	A	524.20	524.20		
17:00-17:15	B	288.36	288.36		
17:00-17:15	C	281.86	281.86		
17:00-17:15	D	39.31	39.31		
17:15-17:30	A	428.00	428.00		
17:15-17:30	B	235.44	235.44		
17:15-17:30	C	230.14	230.14		
17:15-17:30	D	32.09	32.09		
17:30-17:45	A	358.43	358.43		
17:30-17:45	B	197.17	197.17		
17:30-17:45	C	192.73	192.73		
17:30-17:45	D	26.88	26.88		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

	To				

		A	B	C	D
From	A	0.000	223.000	250.000	3.100
	B	203.000	0.000	34.000	24.900
	C	191.000	32.000	0.000	33.000
	D	4.200	17.000	14.500	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.47	0.53	0.01
	B	0.78	0.00	0.13	0.10
	C	0.75	0.13	0.00	0.13
	D	0.12	0.48	0.41	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.23	27.87	0.28	~1	D	31.20	46.80	13.58	17.41	0.15	13.58	17.41
B-AD	0.76	43.56	2.86	10.00	E	209.13	313.69	140.14	26.81	1.56	140.20	26.82
A-BCD	0.01	4.43	0.01	200.00	A	5.42	8.12	0.61	4.49	0.01	0.61	4.49
A-B	-	-	-	-	-	203.42	305.12	-	-	-	-	-
A-C	-	-	-	-	-	228.05	342.07	-	-	-	-	-
D-A	0.01	8.12	0.01	~1	A	3.85	5.78	0.75	7.75	0.01	0.75	7.75
D-BC	0.10	11.58	0.11	~1	B	28.90	43.36	7.53	10.42	0.08	7.53	10.42
C-ABD	0.08	5.82	0.15	~1	A	42.42	63.63	9.75	9.19	0.11	9.75	9.19
C-D	-	-	-	-	-	28.36	42.54	-	-	-	-	-
C-A	-	-	-	-	-	164.13	246.20	-	-	-	-	-

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	25.60	6.40	25.30	0.00	368.39	0.069	0.00	0.07	10.484	B
B-AD	171.58	42.89	168.45	0.00	384.24	0.447	0.00	0.78	16.459	C
A-BCD	3.91	0.98	3.89	0.00	817.11	0.005	0.00	0.00	4.426	A
A-B	167.14	41.79	167.14	0.00	-	-	-	-	-	-
A-C	187.38	46.85	187.38	0.00	-	-	-	-	-	-
D-A	3.16	0.79	3.14	0.00	484.27	0.007	0.00	0.01	7.481	A
D-BC	23.71	5.93	23.47	0.00	405.22	0.059	0.00	0.06	9.424	A
C-ABD	32.09	8.02	31.79	0.00	655.72	0.049	0.00	0.07	5.769	A
C-D	23.67	5.92	23.67	0.00	-	-	-	-	-	-

C-A	136.98	34.24	136.98	0.00	-	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	30.57	7.64	30.41	0.00	295.99	0.103	0.07	0.11	13.546	B
B-AD	204.88	51.22	203.08	0.00	363.11	0.564	0.78	1.23	22.232	C
A-BCD	5.15	1.29	5.14	0.00	846.00	0.006	0.00	0.01	4.281	A
A-B	199.36	49.84	199.36	0.00	-	-	-	-	-	-
A-C	223.50	55.87	223.50	0.00	-	-	-	-	-	-
D-A	3.78	0.94	3.77	0.00	469.46	0.008	0.01	0.01	7.730	A
D-BC	28.32	7.08	28.25	0.00	380.50	0.074	0.06	0.08	10.217	B
C-ABD	40.75	10.19	40.64	0.00	663.12	0.061	0.07	0.10	5.784	A
C-D	27.90	6.98	27.90	0.00	-	-	-	-	-	-
C-A	161.49	40.37	161.49	0.00	-	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	37.43	9.36	36.86	0.00	177.64	0.211	0.11	0.26	25.467	D
B-AD	250.92	62.73	245.22	0.00	331.79	0.756	1.23	2.66	39.171	E
A-BCD	7.17	1.79	7.16	0.00	885.81	0.008	0.01	0.01	4.096	A
A-B	243.76	60.94	243.76	0.00	-	-	-	-	-	-
A-C	273.27	68.32	273.27	0.00	-	-	-	-	-	-
D-A	4.62	1.16	4.62	0.00	449.19	0.010	0.01	0.01	8.097	A
D-BC	34.68	8.67	34.56	0.00	346.86	0.100	0.08	0.11	11.518	B
C-ABD	54.31	13.58	54.12	0.00	673.96	0.081	0.10	0.15	5.812	A
C-D	33.52	8.38	33.52	0.00	-	-	-	-	-	-
C-A	194.03	48.51	194.03	0.00	-	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	37.43	9.36	37.34	0.00	166.36	0.225	0.26	0.28	27.871	D
B-AD	250.92	62.73	250.09	0.00	330.78	0.759	2.66	2.86	43.562	E
A-BCD	7.18	1.80	7.18	0.00	884.79	0.008	0.01	0.01	4.101	A
A-B	243.75	60.94	243.75	0.00	-	-	-	-	-	-
A-C	273.26	68.32	273.26	0.00	-	-	-	-	-	-
D-A	4.62	1.16	4.62	0.00	448.02	0.010	0.01	0.01	8.118	A
D-BC	34.68	8.67	34.68	0.00	345.63	0.100	0.11	0.11	11.576	B
C-ABD	54.37	13.59	54.36	0.00	674.00	0.081	0.15	0.15	5.815	A
C-D	33.51	8.38	33.51	0.00	-	-	-	-	-	-
C-A	193.98	48.49	193.98	0.00	-	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	30.57	7.64	31.20	0.00	282.52	0.108	0.28	0.12	14.358	B
B-AD	204.88	51.22	210.84	0.00	362.05	0.566	2.86	1.37	24.642	C
A-BCD	5.16	1.29	5.17	0.00	844.42	0.006	0.01	0.01	4.290	A
A-B	199.35	49.84	199.35	0.00	-	-	-	-	-	-
A-C	223.49	55.87	223.49	0.00	-	-	-	-	-	-
D-A	3.78	0.94	3.78	0.00	467.74	0.008	0.01	0.01	7.759	A
D-BC	28.32	7.08	28.43	0.00	378.69	0.075	0.11	0.08	10.281	B
C-ABD	40.82	10.20	41.00	0.00	663.17	0.062	0.15	0.10	5.790	A
C-D	27.89	6.97	27.89	0.00	-	-	-	-	-	-
C-A	161.43	40.36	161.43	0.00	-	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	25.60	6.40	25.78	0.00	360.96	0.071	0.12	0.08	10.747	B
B-AD	171.58	42.89	173.73	0.00	383.64	0.447	1.37	0.84	17.322	C
A-BCD	3.92	0.98	3.93	0.00	816.02	0.005	0.01	0.01	4.432	A
A-B	167.14	41.78	167.14	0.00	-	-	-	-	-	-
A-C	187.37	46.84	187.37	0.00	-	-	-	-	-	-
D-A	3.16	0.79	3.17	0.00	483.06	0.007	0.01	0.01	7.503	A
D-BC	23.71	5.93	23.79	0.00	404.02	0.059	0.08	0.06	9.469	A
C-ABD	32.18	8.05	32.30	0.00	655.73	0.049	0.10	0.08	5.778	A
C-D	23.65	5.91	23.65	0.00	-	-	-	-	-	-
C-A	136.89	34.22	136.89	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	1.06	0.07	10.484	B	B
B-AD	10.78	0.72	16.459	C	B
A-BCD	0.07	0.00	4.426	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.09	0.01	7.481	A	A
D-BC	0.89	0.06	9.424	A	A
C-ABD	1.08	0.07	5.769	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:30-16:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	1.64	0.11	13.546	B	B
B-AD	17.14	1.14	22.232	C	C
A-BCD	0.10	0.01	4.281	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.12	0.01	7.730	A	A
D-BC	1.16	0.08	10.217	B	B
C-ABD	1.51	0.10	5.784	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:45-17:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	3.60	0.24	25.467	D	C
B-AD	34.25	2.28	39.171	E	D
A-BCD	0.13	0.01	4.096	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.15	0.01	8.097	A	A
D-BC	1.59	0.11	11.518	B	B
C-ABD	2.23	0.15	5.812	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:00-17:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	4.12	0.27	27.871	D	C
B-AD	41.69	2.78	43.562	E	D
A-BCD	0.13	0.01	4.101	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.16	0.01	8.118	A	A
D-BC	1.65	0.11	11.576	B	B
C-ABD	2.25	0.15	5.815	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:15-17:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	1.96	0.13	14.358	B	B
B-AD	22.91	1.53	24.642	C	C
A-BCD	0.10	0.01	4.290	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.13	0.01	7.759	A	A
D-BC	1.26	0.08	10.281	B	B
C-ABD	1.55	0.10	5.790	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:30-17:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	1.20	0.08	10.747	B	B

B-AD	13.37	0.89	17.322	C	B
A-BCD	0.08	0.01	4.432	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.10	0.01	7.503	A	A
D-BC	0.97	0.06	9.469	A	A
C-ABD	1.13	0.08	5.778	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.07	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.78	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-BCD	0.00	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.06	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.07	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.11	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	1.23	0.00	0.00	1.00	2.00			N/A	N/A
A-BCD	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.08	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.10	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.26	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	2.66	0.00	0.00	5.00	9.00			N/A	N/A
A-BCD	0.01	0.00	0.00	0.00	>199			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.11	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.15	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.28	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	2.86	0.00	0.00	3.00	10.00			N/A	N/A
A-BCD	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.11	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.15	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.12	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	1.37	0.00	0.00	2.00	4.00			N/A	N/A
A-BCD	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.08	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.10	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.08	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.84	0.00	0.00	1.00	2.00			N/A	N/A
A-BCD	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.06	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.08	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - Secondary 2023 Base + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm D - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
Secondary 2023 Base + Dev, AM	Secondary 2023 Base + Dev	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	Tollgate	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		45.27	E

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	A4080		Minor
C	C	A5W		Major
D	D	Lon Graig		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.39		0.00		2.20	160.26	✓	0.00
C	7.39		0.00		2.20	87.90	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				7.00	2.80	2.20	2.20	2.20		0.10	0	10
D	One lane plus flare				7.86	4.58	3.30	3.30	3.09	✓	1.00	11	23

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	666.774	-	-	-	0.243	0.243	0.243	-	0.243	-	-
1	B-AD	476.874	0.082	0.206	-	-	-	0.130	0.295	0.130	0.082	0.206
1	B-C	567.135	0.082	0.206	-	-	-	-	-	-	0.082	0.206
1	C-B	624.866	0.227	0.227	-	-	-	-	-	-	0.227	0.227
1	D-A	573.145	-	-	-	0.209	0.083	0.209	-	0.083	-	-
1	D-BC	523.466	0.142	0.142	0.323	0.226	0.090	0.226	-	0.090	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	268.00	100.000
B	ONE HOUR	✓	279.00	100.000
C	ONE HOUR	✓	487.00	100.000
D	ONE HOUR	✓	62.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowinPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	201.76	201.76		
07:45-08:00	B	210.05	210.05		
07:45-08:00	C	366.64	366.64		
07:45-08:00	D	46.68	46.68		
08:00-08:15	A	240.93	240.93		
08:00-08:15	B	250.82	250.82		
08:00-08:15	C	437.80	437.80		
08:00-08:15	D	55.74	55.74		
08:15-08:30	A	295.07	295.07		
08:15-08:30	B	307.18	307.18		
08:15-08:30	C	536.20	536.20		
08:15-08:30	D	68.26	68.26		
08:30-08:45	A	295.07	295.07		
08:30-08:45	B	307.18	307.18		
08:30-08:45	C	536.20	536.20		
08:30-08:45	D	68.26	68.26		
08:45-09:00	A	240.93	240.93		
08:45-09:00	B	250.82	250.82		
08:45-09:00	C	437.80	437.80		
08:45-09:00	D	55.74	55.74		
09:00-09:15	A	201.76	201.76		
09:00-09:15	B	210.05	210.05		
09:00-09:15	C	366.64	366.64		
09:00-09:15	D	46.68	46.68		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	145.000	123.000	0.000
	B	244.000	0.000	19.000	16.000
	C	438.000	15.000	0.000	34.000
	D	15.000	19.000	28.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.54	0.46	0.00
	B	0.87	0.00	0.07	0.06
	C	0.90	0.03	0.00	0.07
	D	0.24	0.31	0.45	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.19	40.64	0.23	~1	E	17.43	26.15	9.26	21.24	0.10	9.26	21.24
B-AD	0.83	57.74	4.27	16.00	F	238.58	357.87	192.29	32.24	2.14	192.37	32.25
A-BCD	0.00	0.00	0.00	~1	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A-B	-	-	-	-	-	133.05	199.58	-	-	-	-	-
A-C	-	-	-	-	-	112.87	169.30	-	-	-	-	-
D-A	0.04	9.66	0.04	~1	A	13.76	20.85	3.05	8.86	0.03	3.05	8.86
D-BC	0.17	14.32	0.20	~1	B	43.13	64.69	13.27	12.30	0.15	13.27	12.31
C-ABD	0.04	4.58	0.05	~1	A	26.27	39.41	3.70	5.63	0.04	3.70	5.63
C-D	-	-	-	-	-	30.30	45.45	-	-	-	-	-
C-A	-	-	-	-	-	390.31	585.46	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	14.30	3.58	14.14	0.00	356.04	0.040	0.00	0.04	10.525	B
B-AD	195.74	48.94	191.86	0.00	389.54	0.502	0.00	0.97	17.886	C
A-BCD	0.00	0.00	0.00	0.00	533.01	0.000	0.00	0.00	0.000	A
A-B	109.16	27.29	109.16	0.00	-	-	-	-	-	-
A-C	92.60	23.15	92.60	0.00	-	-	-	-	-	-
D-A	11.29	2.82	11.19	0.00	451.66	0.025	0.00	0.03	8.171	A
D-BC	35.38	8.85	34.97	0.00	375.08	0.094	0.00	0.10	10.572	B
C-ABD	19.09	4.77	18.97	0.00	805.91	0.024	0.00	0.03	4.574	A
C-D	25.04	6.26	25.04	0.00	-	-	-	-	-	-
C-A	322.52	80.63	322.52	0.00	-	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	17.08	4.27	16.98	0.00	270.59	0.063	0.04	0.07	14.184	B
B-AD	233.73	58.43	231.24	0.00	370.82	0.630	0.97	1.59	25.318	D
A-BCD	0.00	0.00	0.00	0.00	506.10	0.000	0.00	0.00	0.000	A
A-B	130.35	32.59	130.35	0.00	-	-	-	-	-	-

A-C	110.57	27.64	110.57	0.00	-	-	-	-	-	-
D-A	13.48	3.37	13.46	0.00	426.37	0.032	0.03	0.03	8.718	A
D-BC	42.25	10.56	42.11	0.00	345.42	0.122	0.10	0.14	11.864	B
C-ABD	25.04	6.26	25.00	0.00	840.04	0.030	0.03	0.04	4.416	A
C-D	29.73	7.43	29.73	0.00	-	-	-	-	-	-
C-A	383.03	95.76	383.03	0.00	-	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	20.92	5.23	20.44	0.00	128.37	0.163	0.07	0.19	33.209	D
B-AD	286.27	71.57	277.43	0.00	343.84	0.833	1.59	3.80	48.650	E
A-BCD	0.00	0.00	0.00	0.00	469.59	0.000	0.00	0.00	0.000	A
A-B	159.65	39.91	159.65	0.00	-	-	-	-	-	-
A-C	135.43	33.86	135.43	0.00	-	-	-	-	-	-
D-A	16.52	4.13	16.47	0.00	391.25	0.042	0.03	0.04	9.604	A
D-BC	51.75	12.94	51.49	0.00	305.02	0.170	0.14	0.20	14.185	B
C-ABD	34.64	8.66	34.57	0.00	885.98	0.039	0.04	0.05	4.228	A
C-D	36.13	9.03	36.13	0.00	-	-	-	-	-	-
C-A	465.43	116.36	465.43	0.00	-	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	20.92	5.23	20.76	0.00	109.15	0.192	0.19	0.23	40.637	E
B-AD	286.27	71.57	284.41	0.00	343.03	0.835	3.80	4.27	57.743	F
A-BCD	0.00	0.00	0.00	0.00	467.43	0.000	0.00	0.00	0.000	A
A-B	159.65	39.91	159.65	0.00	-	-	-	-	-	-
A-C	135.43	33.86	135.43	0.00	-	-	-	-	-	-
D-A	16.52	4.13	16.51	0.00	389.25	0.042	0.04	0.04	9.657	A
D-BC	51.75	12.94	51.74	0.00	303.09	0.171	0.20	0.20	14.322	B
C-ABD	34.66	8.67	34.66	0.00	885.97	0.039	0.05	0.05	4.230	A
C-D	36.13	9.03	36.13	0.00	-	-	-	-	-	-
C-A	465.41	116.35	465.41	0.00	-	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	17.08	4.27	17.68	0.00	247.05	0.069	0.23	0.08	15.735	C
B-AD	233.73	58.43	243.43	0.00	369.83	0.632	4.27	1.84	30.268	D
A-BCD	0.00	0.00	0.00	0.00	502.88	0.000	0.00	0.00	0.000	A
A-B	130.35	32.59	130.35	0.00	-	-	-	-	-	-
A-C	110.57	27.64	110.57	0.00	-	-	-	-	-	-
D-A	13.48	3.37	13.53	0.00	423.44	0.032	0.04	0.03	8.783	A
D-BC	42.25	10.56	42.50	0.00	342.55	0.123	0.20	0.14	12.006	B
C-ABD	25.07	6.27	25.13	0.00	840.01	0.030	0.05	0.04	4.418	A
C-D	29.73	7.43	29.73	0.00	-	-	-	-	-	-
C-A	383.00	95.75	383.00	0.00	-	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	14.30	3.58	14.43	0.00	345.10	0.041	0.08	0.04	10.890	B
B-AD	195.74	48.94	198.91	0.00	389.12	0.503	1.84	1.05	19.224	C
A-BCD	0.00	0.00	0.00	0.00	531.21	0.000	0.00	0.00	0.000	A
A-B	109.16	27.29	109.16	0.00	-	-	-	-	-	-
A-C	92.60	23.15	92.60	0.00	-	-	-	-	-	-
D-A	11.29	2.82	11.32	0.00	449.87	0.025	0.03	0.03	8.210	A
D-BC	35.38	8.85	35.53	0.00	373.48	0.095	0.14	0.11	10.656	B
C-ABD	19.15	4.79	19.19	0.00	805.85	0.024	0.04	0.03	4.578	A
C-D	25.03	6.26	25.03	0.00	-	-	-	-	-	-
C-A	322.46	80.61	322.46	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.59	0.04	10.525	B	B
B-AD	13.27	0.88	17.886	C	B
A-BCD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-

D-A	0.37	0.02	8.171	A	A
D-BC	1.47	0.10	10.572	B	B
C-ABD	0.44	0.03	4.574	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:00-08:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.96	0.06	14.184	B	B
B-AD	21.89	1.46	25.318	D	C
A-BCD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.47	0.03	8.718	A	A
D-BC	2.00	0.13	11.864	B	B
C-ABD	0.58	0.04	4.416	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:15-08:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	2.57	0.17	33.209	D	C
B-AD	46.99	3.13	48.650	E	D
A-BCD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.64	0.04	9.604	A	A
D-BC	2.90	0.19	14.185	B	B
C-ABD	0.82	0.05	4.228	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:30-08:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	3.24	0.22	40.637	E	D
B-AD	61.07	4.07	57.743	F	E
A-BCD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.66	0.04	9.657	A	A
D-BC	3.04	0.20	14.322	B	B
C-ABD	0.83	0.06	4.230	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (08:45-09:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	1.21	0.08	15.735	C	B
B-AD	32.06	2.14	30.268	D	C
A-BCD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.51	0.03	8.783	A	A
D-BC	2.22	0.15	12.006	B	B
C-ABD	0.59	0.04	4.418	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (09:00-09:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.68	0.05	10.890	B	B
B-AD	17.00	1.13	19.224	C	B
A-BCD	0.00	0.00	0.000	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.40	0.03	8.210	A	A
D-BC	1.64	0.11	10.656	B	B
C-ABD	0.45	0.03	4.578	A	A

C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.04	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.97	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-BCD	0.00	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.03	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.10	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.03	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.07	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	1.59	0.00	0.00	2.00	3.00			N/A	N/A
A-BCD	0.00	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.03	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.14	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.04	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.19	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	3.80	0.00	0.00	9.00	14.00			N/A	N/A
A-BCD	0.00	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.04	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.20	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.05	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.23	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very		N/A	N/A

						big.			
B-AD	4.27	0.00	0.00	8.00	16.00			N/A	N/A
A-BCD	0.00	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.04	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.20	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.05	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.08	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	1.84	0.00	0.00	3.00	6.00			N/A	N/A
A-BCD	0.00	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.03	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.14	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.04	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.04	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	1.05	0.00	0.00	1.00	3.00			N/A	N/A
A-BCD	0.00	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.03	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.11	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.03	-1	-1	-1	-1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - Secondary 2023 Base + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm D - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default	N/A		✓				100.000	100.000	

Analysis Set)													

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
Secondary 2023 Base + Dev, PM	Secondary 2023 Base + Dev	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	Tolgate	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		23.36	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	A4080		Minor
C	C	A5W		Major
D	D	Lon Graig		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.39		0.00		2.20	160.26	✓	0.00
C	7.39		0.00		2.20	87.90	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				7.00	2.80	2.20	2.20	2.20		0.10	0	10
D	One lane plus flare				7.86	4.58	3.30	3.30	3.99	✓	1.00	11	23

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	666.774	-	-	-	0.243	0.243	0.243	-	0.243	-	-
1	B-AD	476.874	0.082	0.206	-	-	-	0.130	0.295	0.130	0.082	0.206
1	B-C	567.135	0.082	0.206	-	-	-	-	-	-	0.082	0.206
1	C-B	624.866	0.227	0.227	-	-	-	-	-	-	0.227	0.227
1	D-A	554.004	-	-	-	0.202	0.080	0.202	-	0.080	-	-
1	D-BC	529.372	0.144	0.144	0.327	0.229	0.091	0.229	-	0.091	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	449.00	100.000
B	ONE HOUR	✓	235.00	100.000
C	ONE HOUR	✓	254.00	100.000
D	ONE HOUR	✓	36.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	A	338.03	338.03		
16:15-16:30	B	176.92	176.92		
16:15-16:30	C	191.22	191.22		
16:15-16:30	D	27.10	27.10		
16:30-16:45	A	403.64	403.64		
16:30-16:45	B	211.26	211.26		
16:30-16:45	C	228.34	228.34		
16:30-16:45	D	32.36	32.36		
16:45-17:00	A	494.36	494.36		
16:45-17:00	B	258.74	258.74		
16:45-17:00	C	279.66	279.66		
16:45-17:00	D	39.64	39.64		
17:00-17:15	A	494.36	494.36		
17:00-17:15	B	258.74	258.74		
17:00-17:15	C	279.66	279.66		
17:00-17:15	D	39.64	39.64		
17:15-17:30	A	403.64	403.64		
17:15-17:30	B	211.26	211.26		
17:15-17:30	C	228.34	228.34		
17:15-17:30	D	32.36	32.36		
17:30-17:45	A	338.03	338.03		
17:30-17:45	B	176.92	176.92		
17:30-17:45	C	191.22	191.22		
17:30-17:45	D	27.10	27.10		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	196.000	250.000	3.000
	B	176.000	0.000	34.000	25.000
	C	191.000	31.000	0.000	32.000
	D	4.000	17.000	15.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.44	0.56	0.01
	B	0.75	0.00	0.14	0.11
	C	0.75	0.12	0.00	0.13
	D	0.11	0.47	0.42	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU*min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU*min/min)	Inclusive Total Queueing Delay (PCU*min)	Inclusive Average Queueing Delay (s)
B-C	0.16	18.47	0.19	~1	C	31.20	46.80	10.55	13.52	0.12	10.55	13.52
B-AD	0.66	30.86	1.82	5.00	D	184.44	276.66	99.20	21.51	1.10	99.23	21.52
A-BCD	0.01	4.48	0.01	200.00	A	5.06	7.59	0.57	4.52	0.01	0.57	4.52
A-B	-	-	-	-	-	178.84	268.26	-	-	-	-	-
A-C	-	-	-	-	-	228.11	342.17	-	-	-	-	-
D-A	0.01	8.00	0.01	~1	A	3.67	5.51	0.70	7.68	0.01	0.70	7.68
D-BC	0.10	11.16	0.11	~1	B	29.36	44.05	7.43	10.13	0.08	7.44	10.13
C-ABD	0.08	5.75	0.14	~1	A	40.89	61.33	9.19	8.99	0.10	9.19	8.99
C-D	-	-	-	-	-	27.58	41.37	-	-	-	-	-
C-A	-	-	-	-	-	164.61	246.92	-	-	-	-	-

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	25.60	6.40	25.32	0.00	395.56	0.065	0.00	0.07	9.716	A
B-AD	151.32	37.83	148.83	0.00	387.13	0.391	0.00	0.62	14.958	B
A-BCD	3.68	0.92	3.66	0.00	808.71	0.005	0.00	0.00	4.471	A
A-B	146.94	36.73	146.94	0.00	-	-	-	-	-	-
A-C	187.42	46.85	187.42	0.00	-	-	-	-	-	-
D-A	3.01	0.75	2.99	0.00	487.56	0.006	0.00	0.01	7.428	A
D-BC	24.09	6.02	23.85	0.00	413.11	0.058	0.00	0.06	9.242	A
C-ABD	30.98	7.75	30.70	0.00	659.32	0.047	0.00	0.07	5.726	A
C-D	22.99	5.75	22.99	0.00	-	-	-	-	-	-
C-A	137.25	34.31	137.25	0.00	-	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	30.57	7.64	30.44	0.00	335.67	0.091	0.07	0.10	11.789	B
B-AD	180.69	45.17	178.46	0.00	367.04	0.492	0.62	0.93	19.058	C
A-BCD	4.82	1.20	4.81	0.00	836.16	0.006	0.00	0.01	4.330	A
A-B	175.27	43.82	175.27	0.00	-	-	-	-	-	-
A-C	223.56	55.89	223.56	0.00	-	-	-	-	-	-
D-A	3.60	0.90	3.59	0.00	473.72	0.008	0.01	0.01	7.656	A
D-BC	28.77	7.19	28.70	0.00	390.01	0.074	0.06	0.08	9.960	A
C-ABD	39.30	9.82	39.20	0.00	667.32	0.059	0.07	0.09	5.732	A
C-D	27.13	6.78	27.13	0.00	-	-	-	-	-	-

C-A	161.92	40.48	161.92	0.00	-	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	37.43	9.36	37.10	0.00	238.25	0.157	0.10	0.18	17.866	C
B-AD	221.31	55.33	218.05	0.00	337.59	0.656	0.93	1.75	29.313	D
A-BCD	6.66	1.67	6.66	0.00	874.06	0.008	0.01	0.01	4.150	A
A-B	214.32	53.58	214.32	0.00	-	-	-	-	-	-
A-C	273.37	68.34	273.37	0.00	-	-	-	-	-	-
D-A	4.40	1.10	4.40	0.00	454.79	0.010	0.01	0.01	7.992	A
D-BC	35.23	8.81	35.12	0.00	358.53	0.098	0.08	0.11	11.128	B
C-ABD	52.28	13.07	52.10	0.00	678.94	0.077	0.09	0.14	5.747	A
C-D	32.63	8.16	32.63	0.00	-	-	-	-	-	-
C-A	194.75	48.69	194.75	0.00	-	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	37.43	9.36	37.41	0.00	232.32	0.161	0.18	0.19	18.469	C
B-AD	221.31	55.33	221.00	0.00	337.05	0.657	1.75	1.82	30.861	D
A-BCD	6.67	1.67	6.67	0.00	873.46	0.008	0.01	0.01	4.154	A
A-B	214.32	53.58	214.32	0.00	-	-	-	-	-	-
A-C	273.37	68.34	273.37	0.00	-	-	-	-	-	-
D-A	4.40	1.10	4.40	0.00	454.10	0.010	0.01	0.01	8.005	A
D-BC	35.23	8.81	35.23	0.00	357.83	0.098	0.11	0.11	11.158	B
C-ABD	52.33	13.08	52.32	0.00	678.98	0.077	0.14	0.14	5.748	A
C-D	32.62	8.16	32.62	0.00	-	-	-	-	-	-
C-A	194.71	48.68	194.71	0.00	-	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	30.57	7.64	30.90	0.00	328.57	0.093	0.19	0.10	12.106	B
B-AD	180.69	45.17	183.94	0.00	366.44	0.493	1.82	1.01	20.056	C
A-BCD	4.82	1.21	4.83	0.00	835.22	0.006	0.01	0.01	4.336	A
A-B	175.27	43.82	175.27	0.00	-	-	-	-	-	-
A-C	223.55	55.89	223.55	0.00	-	-	-	-	-	-
D-A	3.60	0.90	3.60	0.00	472.70	0.008	0.01	0.01	7.676	A
D-BC	28.77	7.19	28.88	0.00	388.97	0.074	0.11	0.08	10.000	A
C-ABD	39.36	9.84	39.53	0.00	667.36	0.059	0.14	0.10	5.739	A
C-D	27.12	6.78	27.12	0.00	-	-	-	-	-	-
C-A	161.86	40.47	161.86	0.00	-	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	25.60	6.40	25.73	0.00	390.52	0.066	0.10	0.07	9.871	A
B-AD	151.32	37.83	152.73	0.00	386.66	0.391	1.01	0.66	15.482	C
A-BCD	3.69	0.92	3.69	0.00	807.89	0.005	0.01	0.00	4.476	A
A-B	146.93	36.73	146.93	0.00	-	-	-	-	-	-
A-C	187.41	46.85	187.41	0.00	-	-	-	-	-	-
D-A	3.01	0.75	3.02	0.00	486.64	0.006	0.01	0.01	7.443	A
D-BC	24.09	6.02	24.16	0.00	412.24	0.058	0.08	0.06	9.277	A
C-ABD	31.07	7.77	31.18	0.00	659.33	0.047	0.10	0.07	5.735	A
C-D	22.98	5.75	22.98	0.00	-	-	-	-	-	-
C-A	137.17	34.29	137.17	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Stream	Queueing Total Delay (PCU*min)	Queueing Rate Of Delay (PCU*min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	0.98	0.07	9.716	A	A
B-AD	8.71	0.58	14.958	B	B
A-BCD	0.07	0.00	4.471	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.09	0.01	7.428	A	A
D-BC	0.88	0.06	9.242	A	A
C-ABD	1.03	0.07	5.726	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:30-16:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	1.43	0.10	11.789	B	B
B-AD	13.18	0.88	19.058	C	B
A-BCD	0.09	0.01	4.330	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.11	0.01	7.656	A	A
D-BC	1.15	0.08	9.960	A	A
C-ABD	1.43	0.10	5.732	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:45-17:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	2.60	0.17	17.866	C	B
B-AD	23.56	1.57	29.313	D	C
A-BCD	0.12	0.01	4.150	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.14	0.01	7.992	A	A
D-BC	1.57	0.10	11.128	B	B
C-ABD	2.10	0.14	5.747	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:00-17:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	2.80	0.19	18.469	C	B
B-AD	26.90	1.79	30.861	D	C
A-BCD	0.12	0.01	4.154	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.15	0.01	8.005	A	A
D-BC	1.62	0.11	11.158	B	B
C-ABD	2.12	0.14	5.748	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:15-17:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	1.63	0.11	12.106	B	B
B-AD	16.39	1.09	20.056	C	C
A-BCD	0.09	0.01	4.336	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.12	0.01	7.676	A	A
D-BC	1.25	0.08	10.000	A	A
C-ABD	1.46	0.10	5.739	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:30-17:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	1.10	0.07	9.871	A	A
B-AD	10.46	0.70	15.482	C	B
A-BCD	0.07	0.00	4.476	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.10	0.01	7.443	A	A
D-BC	0.97	0.06	9.277	A	A
C-ABD	1.07	0.07	5.735	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.07	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.62	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-BCD	0.00	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.06	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.07	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.10	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.93	0.00	0.00	1.00	1.00			N/A	N/A
A-BCD	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.08	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.09	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.18	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	1.75	0.00	0.00	1.00	5.00			N/A	N/A
A-BCD	0.01	0.00	0.00	>199	>199			N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.11	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.14	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.19	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	1.82	0.00	0.00	1.00	5.00			N/A	N/A
A-BCD	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

D-BC	0.11	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.14	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.10	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	1.01	0.00	0.00	1.00	2.00			N/A	N/A
A-BCD	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.08	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.10	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.07	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	0.66	0.00	0.00	1.00	1.00			N/A	N/A
A-BCD	0.00	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.06	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.07	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - Secondary 2023 Base + Dev + Seasonality, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm D - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
Secondary 2023 Base	Secondary 2023 Base			ONE										

+ Dev + Seasonality, PM	+ Dev + Seasonality	PM		HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	Tollgate	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		258.96	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5E		Major
B	B	A4080		Minor
C	C	A5W		Major
D	D	Lon Graig		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.39		0.00		2.20	160.26	✓	0.00
C	7.39		0.00		2.20	87.90	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				7.00	2.80	2.20	2.20	2.20		0.10	0	10
D	One lane plus flare				7.86	4.58	3.30	3.30	3.09	✓	1.00	11	23

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	666.774	-	-	-	0.243	0.243	0.243	-	0.243	-	-
1	B-AD	476.874	0.082	0.206	-	-	-	0.130	0.295	0.130	0.082	0.206
1	B-C	567.135	0.082	0.206	-	-	-	-	-	-	0.082	0.206
1	C-B	624.866	0.227	0.227	-	-	-	-	-	-	0.227	0.227
1	D-A	554.311	-	-	-	0.202	0.080	0.202	-	0.080	-	-
1	D-BC	529.277	0.144	0.144	0.327	0.229	0.091	0.229	-	0.091	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	650.00	100.000
B	ONE HOUR	✓	333.00	100.000
C	ONE HOUR	✓	378.00	100.000
D	ONE HOUR	✓	53.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	A	489.35	489.35		
16:15-16:30	B	250.70	250.70		
16:15-16:30	C	284.58	284.58		
16:15-16:30	D	39.90	39.90		
16:30-16:45	A	584.34	584.34		
16:30-16:45	B	299.36	299.36		
16:30-16:45	C	339.81	339.81		
16:30-16:45	D	47.65	47.65		
16:45-17:00	A	715.66	715.66		
16:45-17:00	B	366.64	366.64		
16:45-17:00	C	416.19	416.19		
16:45-17:00	D	58.35	58.35		
17:00-17:15	A	715.66	715.66		
17:00-17:15	B	366.64	366.64		
17:00-17:15	C	416.19	416.19		
17:00-17:15	D	58.35	58.35		
17:15-17:30	A	584.34	584.34		
17:15-17:30	B	299.36	299.36		
17:15-17:30	C	339.81	339.81		
17:15-17:30	D	47.65	47.65		
17:30-17:45	A	489.35	489.35		
17:30-17:45	B	250.70	250.70		
17:30-17:45	C	284.58	284.58		
17:30-17:45	D	39.90	39.90		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	273.000	372.000	5.000
	B	244.000	0.000	51.000	38.000
	C	284.000	46.000	0.000	48.000
	D	6.000	25.000	22.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.42	0.57	0.01
	B	0.73	0.00	0.15	0.11
	C	0.75	0.12	0.00	0.13
	D	0.11	0.47	0.42	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

	To

		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	1.19	486.83	6.67	19.00	F	46.80	70.20	296.96	253.73	3.30	299.62	256.10
B-AD	1.19	348.23	30.20	58.00	F	258.77	388.15	1198.19	185.21	13.31	1199.46	185.41
A-BCD	0.02	4.25	0.02	~1	A	10.98	16.48	1.22	4.43	0.01	1.22	4.43
A-B	-	-	-	-	-	247.80	371.70	-	-	-	-	-
A-C	-	-	-	-	-	337.66	506.50	-	-	-	-	-
D-A	0.02	9.31	0.02	~1	A	5.51	8.26	1.19	8.61	0.01	1.19	8.61
D-BC	0.19	16.58	0.23	~1	C	43.13	64.69	14.70	13.63	0.16	14.70	13.63
C-ABD	0.14	5.80	0.32	~1	A	75.61	113.41	20.08	10.62	0.22	20.08	10.63
C-D	-	-	-	-	-	39.22	58.83	-	-	-	-	-
C-A	-	-	-	-	-	232.03	348.05	-	-	-	-	-

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	38.40	9.60	37.71	0.00	258.97	0.148	0.00	0.17	16.223	C
B-AD	212.30	53.08	206.04	0.00	337.65	0.629	0.00	1.57	26.268	D
A-BCD	7.52	1.88	7.48	0.00	872.34	0.009	0.00	0.01	4.162	A
A-B	203.94	50.98	203.94	0.00	-	-	-	-	-	-
A-C	277.90	69.47	277.90	0.00	-	-	-	-	-	-
D-A	4.52	1.13	4.48	0.00	457.05	0.010	0.00	0.01	7.954	A
D-BC	35.38	8.85	34.96	0.00	361.24	0.098	0.00	0.11	11.019	B
C-ABD	53.20	13.30	52.63	0.00	683.01	0.078	0.00	0.14	5.710	A
C-D	33.45	8.36	33.45	0.00	-	-	-	-	-	-
C-A	197.93	49.48	197.93	0.00	-	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	45.85	11.46	44.43	0.00	127.21	0.360	0.17	0.53	42.805	E
B-AD	253.51	63.38	244.52	0.00	302.32	0.839	1.57	3.81	55.107	F
A-BCD	10.21	2.55	10.19	0.00	910.21	0.011	0.01	0.01	3.999	A
A-B	243.00	60.75	243.00	0.00	-	-	-	-	-	-
A-C	331.13	82.78	331.13	0.00	-	-	-	-	-	-
D-A	5.39	1.35	5.38	0.00	435.52	0.012	0.01	0.01	8.369	A
D-BC	42.25	10.56	42.10	0.00	327.27	0.129	0.11	0.15	12.617	B
C-ABD	71.83	17.96	71.58	0.00	700.90	0.102	0.14	0.20	5.726	A
C-D	38.74	9.69	38.74	0.00	-	-	-	-	-	-
C-A	229.24	57.31	229.24	0.00	-	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	56.15	14.04	39.98	0.00	47.28	1.188	0.53	4.57	305.181	F
B-AD	310.49	77.62	256.16	0.00	264.40	1.174	3.81	17.40	178.715	F

A-BCD	14.82	3.70	14.80	0.00	960.70	0.015	0.01	0.02	3.805	A
A-B	296.64	74.16	296.64	0.00	-	-	-	-	-	-
A-C	404.21	101.05	404.21	0.00	-	-	-	-	-	-
D-A	6.61	1.65	6.59	0.00	404.14	0.016	0.01	0.02	9.055	A
D-BC	51.75	12.94	51.44	0.00	280.24	0.185	0.15	0.22	15.713	C
C-ABD	101.48	25.37	101.03	0.00	723.71	0.140	0.20	0.31	5.790	A
C-D	45.50	11.38	45.50	0.00	-	-	-	-	-	-
C-A	269.21	67.30	269.21	0.00	-	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	56.15	14.04	47.74	0.00	51.16	1.098	4.57	6.67	486.826	F
B-AD	310.49	77.62	259.29	0.00	261.27	1.188	17.40	30.20	347.225	F
A-BCD	15.10	3.77	15.09	0.00	952.16	0.016	0.02	0.02	3.841	A
A-B	296.52	74.13	296.52	0.00	-	-	-	-	-	-
A-C	404.05	101.01	404.05	0.00	-	-	-	-	-	-
D-A	6.61	1.65	6.60	0.00	393.20	0.017	0.02	0.02	9.311	A
D-BC	51.75	12.94	51.70	0.00	268.76	0.193	0.22	0.23	16.581	C
C-ABD	101.65	25.41	101.64	0.00	723.86	0.140	0.31	0.32	5.796	A
C-D	45.48	11.37	45.48	0.00	-	-	-	-	-	-
C-A	269.06	67.27	269.06	0.00	-	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	45.85	11.46	47.43	0.00	55.84	0.821	6.67	6.27	462.538	F
B-AD	253.51	63.38	278.91	0.00	288.15	0.880	30.20	23.85	348.235	F
A-BCD	10.55	2.64	10.57	0.00	890.66	0.012	0.02	0.01	4.091	A
A-B	242.86	60.71	242.86	0.00	-	-	-	-	-	-
A-C	330.93	82.73	330.93	0.00	-	-	-	-	-	-
D-A	5.39	1.35	5.41	0.00	413.33	0.013	0.02	0.01	8.826	A
D-BC	42.25	10.56	42.53	0.00	303.10	0.139	0.23	0.16	13.829	B
C-ABD	72.04	18.01	72.46	0.00	701.12	0.103	0.32	0.21	5.736	A
C-D	38.71	9.68	38.71	0.00	-	-	-	-	-	-
C-A	229.06	57.27	229.06	0.00	-	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
B-C	38.40	9.60	53.84	0.00	63.23	0.607	6.27	2.41	317.992	F
B-AD	212.30	53.08	293.26	0.00	306.42	0.693	23.85	3.81	182.644	F
A-BCD	7.72	1.93	7.73	0.00	855.05	0.009	0.01	0.01	4.250	A
A-B	203.86	50.96	203.86	0.00	-	-	-	-	-	-
A-C	277.78	69.45	277.78	0.00	-	-	-	-	-	-
D-A	4.52	1.13	4.53	0.00	438.71	0.010	0.01	0.01	8.292	A
D-BC	35.38	8.85	35.57	0.00	341.12	0.104	0.16	0.12	11.791	B
C-ABD	53.47	13.37	53.72	0.00	683.12	0.078	0.21	0.15	5.728	A
C-D	33.41	8.35	33.41	0.00	-	-	-	-	-	-
C-A	197.70	49.42	197.70	0.00	-	-	-	-	-	-

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	2.40	0.16	16.223	C	B
B-AD	20.45	1.36	26.268	D	C
A-BCD	0.14	0.01	4.162	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.14	0.01	7.954	A	A
D-BC	1.53	0.10	11.019	B	B
C-ABD	2.09	0.14	5.710	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:30-16:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	7.00	0.47	42.805	E	D
B-AD	46.59	3.11	55.107	F	E
A-BCD	0.19	0.01	3.999	A	A

A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.18	0.01	8.369	A	A
D-BC	2.12	0.14	12.617	B	B
C-ABD	3.08	0.21	5.726	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (16:45-17:00)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	42.04	2.80	305.181	F	F
B-AD	164.00	10.93	178.715	F	F
A-BCD	0.27	0.02	3.805	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.24	0.02	9.055	A	A
D-BC	3.19	0.21	15.713	C	B
C-ABD	4.74	0.32	5.790	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:00-17:15)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	84.75	5.65	486.826	F	F
B-AD	357.50	23.83	347.225	F	F
A-BCD	0.28	0.02	3.841	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.25	0.02	9.311	A	A
D-BC	3.46	0.23	16.581	C	B
C-ABD	4.81	0.32	5.796	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:15-17:30)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	96.86	6.46	462.538	F	F
B-AD	405.31	27.02	348.235	F	F
A-BCD	0.20	0.01	4.091	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.21	0.01	8.826	A	A
D-BC	2.57	0.17	13.829	B	B
C-ABD	3.17	0.21	5.736	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queueing Delay results: (17:30-17:45)

Stream	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
B-C	63.82	4.25	317.992	F	F
B-AD	204.33	13.62	182.644	F	F
A-BCD	0.15	0.01	4.250	A	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-A	0.16	0.01	8.292	A	A
D-BC	1.82	0.12	11.791	B	B
C-ABD	2.20	0.15	5.728	A	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.17	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-AD	1.57	0.00	0.00	2.00	3.00			N/A	N/A

A-BCD	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.11	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.14	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.53	0.00	0.00	0.00	1.00			N/A	N/A
B-AD	3.81	0.00	1.00	8.00	12.00			N/A	N/A
A-BCD	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.15	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.20	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	4.57	0.00	3.00	8.00	11.00			N/A	N/A
B-AD	17.40	4.00	15.00	30.00	36.00			N/A	N/A
A-BCD	0.02	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.02	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.22	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.31	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	6.67	0.00	4.00	14.00	19.00			N/A	N/A
B-AD	30.20	9.00	27.00	49.00	58.00			N/A	N/A
A-BCD	0.02	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.02	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.23	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.32	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	6.27	0.00	3.00	14.00	19.00			N/A	N/A
B-AD	23.85	5.00	20.00	42.00	50.00			N/A	N/A
A-BCD	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.16	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.21	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	2.41	0.00	0.00	5.00	8.00			N/A	N/A
B-AD	3.61	0.00	0.00	7.00	13.00			N/A	N/A
A-BCD	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-A	0.01	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.12	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-ABD	0.15	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-

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Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A55J8_EB_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A55 J8\2018 DF
Report generation date: 14/06/2018 15:17:46

» (Default Analysis Set) - 2017 Base, AM
» (Default Analysis Set) - 2017 Base, PM
» (Default Analysis Set) - 2023 Base, AM
» (Default Analysis Set) - 2023 Base, PM
» (Default Analysis Set) - 2023 Base + Dev, AM
» (Default Analysis Set) - 2023 Base + Dev, PM

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Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2017 Base							
Stream B-CD	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream B-AD	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream A-BCD	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
Stream D-AB	1.00	11.50	0.50	B	0.46	8.23	0.32	A
Stream D-BC	0.72	13.44	0.42	B	0.12	9.89	0.11	A
Stream C-D	-	-	-	-	-	-	-	-
Stream C-A	-	-	-	-	-	-	-	-
Stream C-B	0.06	7.38	0.06	A	0.09	7.57	0.08	A
	A1 - 2023 Base							
Stream B-CD	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream B-AD	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream A-BCD	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
Stream D-AB	1.17	12.68	0.54	B	0.51	8.62	0.34	A
Stream D-BC	0.82	14.51	0.46	B	0.13	10.26	0.12	B
Stream C-D	-	-	-	-	-	-	-	-
Stream C-A	-	-	-	-	-	-	-	-
Stream C-B	0.07	7.56	0.06	A	0.09	7.75	0.08	A
	A1 - 2023 Base + Dev							
Stream B-CD	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream B-AD	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream A-BCD	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
Stream D-AB	1.25	13.59	0.56	B	0.53	9.02	0.35	A
Stream D-BC	0.88	15.56	0.47	C	0.14	10.78	0.12	B
Stream C-D	-	-	-	-	-	-	-	-
Stream C-A	-	-	-	-	-	-	-	-
Stream C-B	0.07	7.82	0.07	A	0.10	8.02	0.09	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:30 - 18:00
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:30 - 18:00
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:30 - 18:00

Run using Junctions 8.0.6.541 at 14/06/2018 15:17:38

File summary

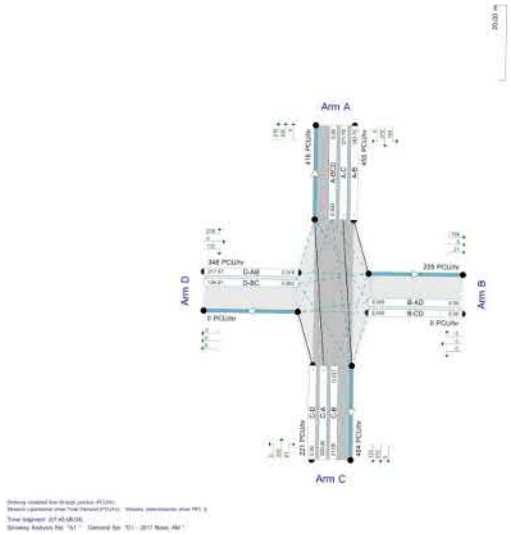
Title	(untitled)
Location	
Site Number	
Date	14/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue Variations cannot be calculated for crossroads.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, AM	2017 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	A55J8 WESTBOUND	Crossroads	Two-way	A,B,C,D	11.97	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5025 E		Major
B	B	EB ON		Minor
C	C	A5025W		Major
D	D	EB Off		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	8.00		0.00		2.20	190.00	✓	1.00
C	8.00		0.00		2.20	180.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		5.00	5.00								40	115
D	Two lanes		4.70	4.54								40	79

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	683.994	-	-	-	-	-	-	0.242	0.346	0.242	-	-	-
1	B-A	656.963	0.109	0.276	0.276	-	-	-	0.174	0.394	-	0.276	0.276	0.138
1	B-C	835.763	0.117	0.296	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	656.963	0.109	0.276	0.276	-	-	-	0.174	0.394	0.174	-	-	-
1	B-D, offside lane	656.963	0.109	0.276	0.276	-	-	-	0.174	0.394	0.174	-	-	-
1	C-B	678.203	0.240	0.240	0.343	-	-	-	-	-	-	-	-	-
1	D-A	788.328	-	-	-	-	-	-	0.279	-	0.110	-	-	-
1	D-B, nearside lane	619.676	0.164	0.164	0.372	-	-	-	0.260	0.260	0.103	-	-	-
1	D-B, offside lane	611.194	0.162	0.162	0.367	-	-	-	0.257	0.257	0.102	-	-	-
1	D-C	611.194	-	0.162	0.367	0.128	0.257	0.257	0.257	0.257	0.102	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	605.00	100.000
B	ONE HOUR	✓	0.00	100.000
C	ONE HOUR	✓	294.00	100.000
D	ONE HOUR	✓	467.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	455.48	455.48		
07:45-08:00	B	0.00	0.00		
07:45-08:00	C	221.34	221.34		
07:45-08:00	D	351.58	351.58		
08:00-08:15	A	543.88	543.88		
08:00-08:15	B	0.00	0.00		
08:00-08:15	C	264.30	264.30		
08:00-08:15	D	419.82	419.82		
08:15-08:30	A	666.12	666.12		
08:15-08:30	B	0.00	0.00		
08:15-08:30	C	323.70	323.70		
08:15-08:30	D	514.18	514.18		
08:30-08:45	A	666.12	666.12		
08:30-08:45	B	0.00	0.00		
08:30-08:45	C	323.70	323.70		
08:30-08:45	D	514.18	514.18		
08:45-09:00	A	543.88	543.88		
08:45-09:00	B	0.00	0.00		
08:45-09:00	C	264.30	264.30		
08:45-09:00	D	419.82	419.82		
09:00-09:15	A	455.48	455.48		
09:00-09:15	B	0.00	0.00		
09:00-09:15	C	221.34	221.34		
09:00-09:15	D	351.58	351.58		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	244.000	361.000	0.000
	B	0.000	0.000	0.000	0.000
	C	266.000	28.000	0.000	0.000
	D	289.000	0.000	178.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.40	0.60	0.00
	B	0.25	0.25	0.25	0.25
	C	0.90	0.10	0.00	0.00
	D	0.62	0.00	0.38	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-CD	0.00	0.00	0.00	−1	A
B-AD	0.00	0.00	0.00	−1	A
A-BCD	0.00	0.00	0.00	−1	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	0.50	11.50	1.00	?	B
D-BC	0.42	13.44	0.72	1.00	B
C-D	-	-	-	-	-
C-A	-	-	-	-	-
C-B	0.06	7.38	0.06	−1	A

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	607.86	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	476.24	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	931.42	0.000	0.00	0.000	A
A-B	183.70	183.70	0.00	-	-	-	-	-
A-C	271.78	271.78	0.00	-	-	-	-	-
D-AB	217.57	215.73	0.00	684.40	0.318	0.46	7.652	A
D-BC	134.01	132.60	0.00	510.41	0.263	0.35	9.494	A
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	200.26	200.26	0.00	-	-	-	-	-
C-B	21.08	20.93	0.00	568.93	0.037	0.04	6.567	A

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	582.52	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	439.57	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	919.41	0.000	0.00	0.000	A
A-B	219.35	219.35	0.00	-	-	-	-	-
A-C	324.53	324.53	0.00	-	-	-	-	-
D-AB	259.81	259.10	0.00	662.31	0.392	0.64	8.912	A
D-BC	160.02	159.52	0.00	490.81	0.326	0.48	10.850	B
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	239.13	239.13	0.00	-	-	-	-	-
C-B	25.17	25.13	0.00	547.72	0.046	0.05	6.888	A

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	547.20	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	388.35	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	902.71	0.000	0.00	0.000	A
A-B	268.65	268.65	0.00	-	-	-	-	-
A-C	397.47	397.47	0.00	-	-	-	-	-
D-AB	318.19	316.77	0.00	631.27	0.504	0.99	11.394	B
D-BC	195.98	195.03	0.00	463.75	0.423	0.71	13.346	B
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	292.87	292.87	0.00	-	-	-	-	-
C-B	30.83	30.77	0.00	518.40	0.059	0.06	7.382	A

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	547.18	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	387.98	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	902.69	0.000	0.00	0.000	A
A-B	268.65	268.65	0.00	-	-	-	-	-
A-C	397.47	397.47	0.00	-	-	-	-	-
D-AB	318.19	318.14	0.00	630.91	0.504	1.00	11.504	B
D-BC	195.98	195.95	0.00	463.74	0.423	0.72	13.439	B
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	292.87	292.87	0.00	-	-	-	-	-
C-B	30.83	30.83	0.00	518.40	0.059	0.06	7.382	A

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	582.49	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	439.03	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	919.38	0.000	0.00	0.000	A
A-B	219.35	219.35	0.00	-	-	-	-	-
A-C	324.53	324.53	0.00	-	-	-	-	-
D-AB	259.81	261.20	0.00	661.76	0.393	0.66	9.018	A
D-BC	160.02	160.94	0.00	490.78	0.326	0.49	10.944	B
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	239.13	239.13	0.00	-	-	-	-	-
C-B	25.17	25.23	0.00	547.72	0.046	0.05	6.892	A

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	607.80	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	475.57	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	931.34	0.000	0.00	0.000	A
A-B	183.70	183.70	0.00	-	-	-	-	-
A-C	271.78	271.78	0.00	-	-	-	-	-
D-AB	217.57	218.31	0.00	683.69	0.318	0.47	7.749	A
D-BC	134.01	134.53	0.00	510.36	0.263	0.36	9.593	A
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	200.26	200.26	0.00	-	-	-	-	-
C-B	21.08	21.12	0.00	568.93	0.037	0.04	6.573	A

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.46	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.35	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.64	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.48	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.99	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.71	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.06	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	1.00	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.72	0.00	0.00	0.00	1.00			N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.06	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.66	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.49	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.47	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.36	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue Variations cannot be calculated for crossroads.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, PM	2017 Base	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	A55J8 WESTBOUND	Crossroads	Two-way	A,B,C,D	8.40	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5025 E		Major
B	B	EB ON		Minor
C	C	A5025W		Major
D	D	EB Off		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	8.00		0.00		2.20	190.00	✓	1.00
C	8.00		0.00		2.20	180.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		5.00	5.00								40	115
D	Two lanes		4.70	4.54								40	79

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	683.994	-	-	-	-	-	-	0.242	0.346	0.242	-	-	-
1	B-A	656.963	0.109	0.276	0.276	-	-	-	0.174	0.394	-	0.276	0.276	0.138
1	B-C	835.763	0.117	0.296	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	656.963	0.109	0.276	0.276	-	-	-	0.174	0.394	0.174	-	-	-
1	B-D, offside lane	656.963	0.109	0.276	0.276	-	-	-	0.174	0.394	0.174	-	-	-
1	C-B	678.203	0.240	0.240	0.343	-	-	-	-	-	-	-	-	-
1	D-A	788.328	-	-	-	-	-	-	0.279	-	0.110	-	-	-
1	D-B, nearside lane	619.676	0.164	0.164	0.372	-	-	-	0.260	0.260	0.103	-	-	-
1	D-B, offside lane	611.194	0.162	0.162	0.367	-	-	-	0.257	0.257	0.102	-	-	-
1	D-C	611.194	-	0.162	0.367	0.128	0.257	0.257	0.257	0.257	0.102	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	613.10	100.000
B	ONE HOUR	✓	0.00	100.000
C	ONE HOUR	✓	465.10	100.000
D	ONE HOUR	✓	223.90	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowinPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:30-16:45	A	461.57	461.57		
16:30-16:45	B	0.00	0.00		
16:30-16:45	C	350.15	350.15		
16:30-16:45	D	168.56	168.56		
16:45-17:00	A	551.16	551.16		
16:45-17:00	B	0.00	0.00		
16:45-17:00	C	418.12	418.12		
16:45-17:00	D	201.28	201.28		
17:00-17:15	A	675.04	675.04		
17:00-17:15	B	0.00	0.00		
17:00-17:15	C	512.08	512.08		
17:00-17:15	D	246.52	246.52		
17:15-17:30	A	675.04	675.04		
17:15-17:30	B	0.00	0.00		
17:15-17:30	C	512.08	512.08		
17:15-17:30	D	246.52	246.52		
17:30-17:45	A	551.16	551.16		
17:30-17:45	B	0.00	0.00		
17:30-17:45	C	418.12	418.12		
17:30-17:45	D	201.28	201.28		
17:45-18:00	A	461.57	461.57		
17:45-18:00	B	0.00	0.00		
17:45-18:00	C	350.15	350.15		
17:45-18:00	D	168.56	168.56		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	218.000	395.100	0.000
	B	0.000	0.000	0.000	0.000
	C	428.100	37.000	0.000	0.000
	D	182.900	0.000	41.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.36	0.64	0.00
	B	0.25	0.25	0.25	0.25
	C	0.92	0.08	0.00	0.00
	D	0.82	0.00	0.18	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-CD	0.00	0.00	0.00	−1	A
B-AD	0.00	0.00	0.00	−1	A
A-BCD	0.00	0.00	0.00	−1	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	0.32	8.23	0.46	1.00	A
D-BC	0.11	9.89	0.12	−1	A
C-D	-	-	-	-	-
C-A	-	-	-	-	-
C-B	0.08	7.57	0.09	−1	A

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	585.89	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	467.83	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	895.93	0.000	0.00	0.000	A
A-B	164.12	164.12	0.00	-	-	-	-	-
A-C	297.45	297.45	0.00	-	-	-	-	-
D-AB	137.70	136.70	0.00	687.06	0.200	0.25	6.529	A
D-BC	30.87	30.59	0.00	473.17	0.065	0.07	8.129	A
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	322.30	322.30	0.00	-	-	-	-	-
C-B	27.86	27.65	0.00	567.47	0.049	0.05	6.668	A

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	555.72	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	430.52	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	876.52	0.000	0.00	0.000	A
A-B	195.98	195.98	0.00	-	-	-	-	-
A-C	355.19	355.19	0.00	-	-	-	-	-
D-AB	164.42	164.12	0.00	666.84	0.247	0.32	7.156	A
D-BC	36.86	36.78	0.00	446.33	0.083	0.09	8.787	A
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	384.85	384.85	0.00	-	-	-	-	-
C-B	33.26	33.21	0.00	545.97	0.061	0.06	7.020	A

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	513.29	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	378.91	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	849.32	0.000	0.00	0.000	A
A-B	240.02	240.02	0.00	-	-	-	-	-
A-C	435.01	435.01	0.00	-	-	-	-	-
D-AB	201.38	200.85	0.00	638.63	0.315	0.45	8.213	A
D-BC	45.14	45.01	0.00	409.27	0.110	0.12	9.880	A
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	471.35	471.35	0.00	-	-	-	-	-
C-B	40.74	40.66	0.00	516.26	0.079	0.08	7.569	A

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	513.27	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	378.78	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	849.28	0.000	0.00	0.000	A
A-B	240.02	240.02	0.00	-	-	-	-	-
A-C	435.01	435.01	0.00	-	-	-	-	-
D-AB	201.38	201.36	0.00	638.58	0.315	0.46	8.233	A
D-BC	45.14	45.14	0.00	409.25	0.110	0.12	9.886	A
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	471.35	471.35	0.00	-	-	-	-	-
C-B	40.74	40.74	0.00	516.26	0.079	0.09	7.569	A

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	555.68	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	430.32	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	876.47	0.000	0.00	0.000	A
A-B	195.98	195.98	0.00	-	-	-	-	-
A-C	355.19	355.19	0.00	-	-	-	-	-
D-AB	164.42	164.93	0.00	666.76	0.247	0.33	7.183	A
D-BC	36.86	36.99	0.00	446.29	0.083	0.09	8.799	A
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	384.85	384.85	0.00	-	-	-	-	-
C-B	33.26	33.34	0.00	545.97	0.061	0.07	7.025	A

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	585.82	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	467.50	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	895.82	0.000	0.00	0.000	A
A-B	164.12	164.12	0.00	-	-	-	-	-
A-C	297.45	297.45	0.00	-	-	-	-	-
D-AB	137.70	138.01	0.00	686.92	0.200	0.25	6.561	A
D-BC	30.87	30.95	0.00	473.10	0.065	0.07	8.143	A
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	322.30	322.30	0.00	-	-	-	-	-
C-B	27.86	27.91	0.00	567.47	0.049	0.05	6.671	A

Queue Variation Results for each time segment

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.25	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.32	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.06	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.45	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.12	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.08	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.46	0.00	0.00	0.00	1.00			N/A	N/A
D-BC	0.12	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.33	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:45-18:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.25	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue Variations cannot be calculated for crossroads.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, AM	2023 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	A55J8 WESTBOUND	Crossroads	Two-way	A,B,C,D	13.04	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5025 E		Major
B	B	EB ON		Minor
C	C	A5025W		Major
D	D	EB Off		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	8.00		0.00		2.20	190.00	✓	1.00
C	8.00		0.00		2.20	180.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		5.00	5.00								40	115
D	Two lanes		4.70	4.54								40	79

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	683.994	-	-	-	-	-	-	0.242	0.346	0.242	-	-	-
1	B-A	656.963	0.109	0.276	0.276	-	-	-	0.174	0.394	-	0.276	0.276	0.138
1	B-C	835.763	0.117	0.296	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	656.963	0.109	0.276	0.276	-	-	-	0.174	0.394	0.174	-	-	-
1	B-D, offside lane	656.963	0.109	0.276	0.276	-	-	-	0.174	0.394	0.174	-	-	-
1	C-B	678.203	0.240	0.240	0.343	-	-	-	-	-	-	-	-	-
1	D-A	788.328	-	-	-	-	-	-	0.279	-	0.110	-	-	-
1	D-B, nearside lane	619.676	0.164	0.164	0.372	-	-	-	0.260	0.260	0.103	-	-	-
1	D-B, offside lane	611.194	0.162	0.162	0.367	-	-	-	0.257	0.257	0.102	-	-	-
1	D-C	611.194	-	0.162	0.367	0.128	0.257	0.257	0.257	0.257	0.102	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	640.00	100.000
B	ONE HOUR	✓	0.00	100.000
C	ONE HOUR	✓	312.00	100.000
D	ONE HOUR	✓	494.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	481.83	481.83		
07:45-08:00	B	0.00	0.00		
07:45-08:00	C	234.89	234.89		
07:45-08:00	D	371.91	371.91		
08:00-08:15	A	575.35	575.35		
08:00-08:15	B	0.00	0.00		
08:00-08:15	C	280.48	280.48		
08:00-08:15	D	444.10	444.10		
08:15-08:30	A	704.65	704.65		
08:15-08:30	B	0.00	0.00		
08:15-08:30	C	343.52	343.52		
08:15-08:30	D	543.90	543.90		
08:30-08:45	A	704.65	704.65		
08:30-08:45	B	0.00	0.00		
08:30-08:45	C	343.52	343.52		
08:30-08:45	D	543.90	543.90		
08:45-09:00	A	575.35	575.35		
08:45-09:00	B	0.00	0.00		
08:45-09:00	C	280.48	280.48		
08:45-09:00	D	444.10	444.10		
09:00-09:15	A	481.83	481.83		
09:00-09:15	B	0.00	0.00		
09:00-09:15	C	234.89	234.89		
09:00-09:15	D	371.91	371.91		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	258.000	382.000	0.000
	B	0.000	0.000	0.000	0.000
	C	282.000	30.000	0.000	0.000
	D	306.000	0.000	188.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.40	0.60	0.00
	B	0.25	0.25	0.25	0.25
	C	0.90	0.10	0.00	0.00
	D	0.62	0.00	0.38	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-CD	0.00	0.00	0.00	−1	A
B-AD	0.00	0.00	0.00	−1	A
A-BCD	0.00	0.00	0.00	−1	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	0.54	12.68	1.17	1.00	B
D-BC	0.46	14.51	0.82	1.00	B
C-D	-	-	-	-	-
C-A	-	-	-	-	-
C-B	0.06	7.56	0.07	−1	A

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	600.19	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	465.28	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	927.64	0.000	0.00	0.000	A
A-B	194.24	194.24	0.00	-	-	-	-	-
A-C	287.59	287.59	0.00	-	-	-	-	-
D-AB	230.37	228.34	0.00	677.97	0.340	0.51	7.971	A
D-BC	141.54	140.00	0.00	504.37	0.281	0.38	9.839	A
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	212.30	212.30	0.00	-	-	-	-	-
C-B	22.59	22.42	0.00	562.61	0.040	0.04	6.662	A

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	573.29	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	426.23	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	914.85	0.000	0.00	0.000	A
A-B	231.94	231.94	0.00	-	-	-	-	-
A-C	343.41	343.41	0.00	-	-	-	-	-
D-AB	275.09	274.27	0.00	654.36	0.420	0.71	9.450	A
D-BC	169.01	168.44	0.00	483.60	0.349	0.53	11.400	B
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	253.51	253.51	0.00	-	-	-	-	-
C-B	26.97	26.93	0.00	540.17	0.050	0.05	7.013	A

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	535.74	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	371.53	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	897.05	0.000	0.00	0.000	A
A-B	284.06	284.06	0.00	-	-	-	-	-
A-C	420.59	420.59	0.00	-	-	-	-	-
D-AB	336.91	335.16	0.00	621.11	0.542	1.15	12.510	B
D-BC	206.99	205.85	0.00	454.92	0.455	0.81	14.386	B
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	310.49	310.49	0.00	-	-	-	-	-
C-B	33.03	32.96	0.00	509.15	0.065	0.07	7.560	A

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	535.72	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	371.07	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	897.02	0.000	0.00	0.000	A
A-B	284.06	284.06	0.00	-	-	-	-	-
A-C	420.59	420.59	0.00	-	-	-	-	-
D-AB	336.91	336.84	0.00	620.66	0.543	1.17	12.676	B
D-BC	206.99	206.95	0.00	454.90	0.455	0.82	14.511	B
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	310.49	310.49	0.00	-	-	-	-	-
C-B	33.03	33.03	0.00	509.15	0.065	0.07	7.560	A

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	573.26	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	425.58	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	914.81	0.000	0.00	0.000	A
A-B	231.94	231.94	0.00	-	-	-	-	-
A-C	343.41	343.41	0.00	-	-	-	-	-
D-AB	275.09	276.81	0.00	653.71	0.421	0.74	9.594	A
D-BC	169.01	170.11	0.00	483.57	0.350	0.55	11.524	B
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	253.51	253.51	0.00	-	-	-	-	-
C-B	26.97	27.03	0.00	540.17	0.050	0.05	7.018	A

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	600.13	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	464.53	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	927.56	0.000	0.00	0.000	A
A-B	194.24	194.24	0.00	-	-	-	-	-
A-C	287.59	287.59	0.00	-	-	-	-	-
D-AB	230.37	231.24	0.00	677.18	0.340	0.52	8.088	A
D-BC	141.54	142.14	0.00	504.32	0.281	0.40	9.958	A
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	212.30	212.30	0.00	-	-	-	-	-
C-B	22.59	22.63	0.00	562.61	0.040	0.04	6.666	A

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.51	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.38	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.71	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.53	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	1.15	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.81	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	1.17	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.82	0.00	0.00	0.00	1.00			N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.74	0.00	0.00	0.00	1.00			N/A	N/A
D-BC	0.55	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.52	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.40	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue Variations cannot be calculated for crossroads.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, PM	2023 Base	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	A55J8 WESTBOUND	Crossroads	Two-way	A,B,C,D	8.76	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5025 E		Major
B	B	EB ON		Minor
C	C	A5025W		Major
D	D	EB Off		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	8.00		0.00		2.20	190.00	✓	1.00
C	8.00		0.00		2.20	180.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		5.00	5.00								40	115
D	Two lanes		4.70	4.54								40	79

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	683.994	-	-	-	-	-	-	0.242	0.346	0.242	-	-	-
1	B-A	656.963	0.109	0.276	0.276	-	-	-	0.174	0.394	-	0.276	0.276	0.138
1	B-C	835.763	0.117	0.296	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	656.963	0.109	0.276	0.276	-	-	-	0.174	0.394	0.174	-	-	-
1	B-D, offside lane	656.963	0.109	0.276	0.276	-	-	-	0.174	0.394	0.174	-	-	-
1	C-B	678.203	0.240	0.240	0.343	-	-	-	-	-	-	-	-	-
1	D-A	788.328	-	-	-	-	-	-	0.279	-	0.110	-	-	-
1	D-B, nearside lane	619.676	0.164	0.164	0.372	-	-	-	0.260	0.260	0.103	-	-	-
1	D-B, offside lane	611.194	0.162	0.162	0.367	-	-	-	0.257	0.257	0.102	-	-	-
1	D-C	611.194	-	0.162	0.367	0.128	0.257	0.257	0.257	0.257	0.102	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	647.00	100.000
B	ONE HOUR	✓	0.00	100.000
C	ONE HOUR	✓	491.00	100.000
D	ONE HOUR	✓	236.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:30-16:45	A	487.10	487.10		
16:30-16:45	B	0.00	0.00		
16:30-16:45	C	369.65	369.65		
16:30-16:45	D	177.67	177.67		
16:45-17:00	A	581.64	581.64		
16:45-17:00	B	0.00	0.00		
16:45-17:00	C	441.40	441.40		
16:45-17:00	D	212.16	212.16		
17:00-17:15	A	712.36	712.36		
17:00-17:15	B	0.00	0.00		
17:00-17:15	C	540.60	540.60		
17:00-17:15	D	259.84	259.84		
17:15-17:30	A	712.36	712.36		
17:15-17:30	B	0.00	0.00		
17:15-17:30	C	540.60	540.60		
17:15-17:30	D	259.84	259.84		
17:30-17:45	A	581.64	581.64		
17:30-17:45	B	0.00	0.00		
17:30-17:45	C	441.40	441.40		
17:30-17:45	D	212.16	212.16		
17:45-18:00	A	487.10	487.10		
17:45-18:00	B	0.00	0.00		
17:45-18:00	C	369.65	369.65		
17:45-18:00	D	177.67	177.67		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	230.000	417.000	0.000
	B	0.000	0.000	0.000	0.000
	C	452.000	39.000	0.000	0.000
	D	193.000	0.000	43.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.36	0.64	0.00
	B	0.25	0.25	0.25	0.25
	C	0.92	0.08	0.00	0.00
	D	0.82	0.00	0.18	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-CD	0.00	0.00	0.00	−1	A
B-AD	0.00	0.00	0.00	−1	A
A-BCD	0.00	0.00	0.00	−1	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	0.34	8.62	0.51	1.00	A
D-BC	0.12	10.26	0.13	−1	B
C-D	-	-	-	-	-
C-A	-	-	-	-	-
C-B	0.08	7.75	0.09	−1	A

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	577.34	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	457.28	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	890.42	0.000	0.00	0.000	A
A-B	173.16	173.16	0.00	-	-	-	-	-
A-C	313.94	313.94	0.00	-	-	-	-	-
D-AB	145.30	144.23	0.00	681.38	0.213	0.27	6.688	A
D-BC	32.37	32.08	0.00	465.50	0.070	0.07	8.301	A
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	340.29	340.29	0.00	-	-	-	-	-
C-B	29.36	29.14	0.00	561.35	0.052	0.05	6.761	A

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	545.35	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	417.85	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	869.84	0.000	0.00	0.000	A
A-B	206.77	206.77	0.00	-	-	-	-	-
A-C	374.87	374.87	0.00	-	-	-	-	-
D-AB	173.50	173.17	0.00	659.98	0.263	0.35	7.390	A
D-BC	38.66	38.57	0.00	437.16	0.088	0.10	9.029	A
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	406.34	406.34	0.00	-	-	-	-	-
C-B	35.06	35.00	0.00	538.66	0.065	0.07	7.147	A

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	500.28	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	363.25	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	840.96	0.000	0.00	0.000	A
A-B	253.23	253.23	0.00	-	-	-	-	-
A-C	459.13	459.13	0.00	-	-	-	-	-
D-AB	212.50	211.90	0.00	630.08	0.337	0.50	8.597	A
D-BC	47.34	47.19	0.00	398.04	0.119	0.13	10.256	B
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	497.66	497.66	0.00	-	-	-	-	-
C-B	42.94	42.85	0.00	507.30	0.085	0.09	7.748	A

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	545.30	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	363.10	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	840.93	0.000	0.00	0.000	A
A-B	253.23	253.23	0.00	-	-	-	-	-
A-C	459.13	459.13	0.00	-	-	-	-	-
D-AB	212.50	212.48	0.00	630.02	0.337	0.51	8.622	A
D-BC	47.34	47.34	0.00	398.02	0.119	0.13	10.265	B
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	497.66	497.66	0.00	-	-	-	-	-
C-B	42.94	42.94	0.00	507.30	0.085	0.09	7.752	A

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	545.30	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	417.63	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	869.78	0.000	0.00	0.000	A
A-B	206.77	206.77	0.00	-	-	-	-	-
A-C	374.87	374.87	0.00	-	-	-	-	-
D-AB	173.50	174.08	0.00	659.88	0.263	0.36	7.421	A
D-BC	38.66	38.80	0.00	437.12	0.088	0.10	9.040	A
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	406.34	406.34	0.00	-	-	-	-	-
C-B	35.06	35.15	0.00	538.66	0.065	0.07	7.150	A

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	577.26	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	456.92	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	890.31	0.000	0.00	0.000	A
A-B	173.16	173.16	0.00	-	-	-	-	-
A-C	313.94	313.94	0.00	-	-	-	-	-
D-AB	145.30	145.65	0.00	681.23	0.213	0.27	6.727	A
D-BC	32.37	32.46	0.00	465.42	0.070	0.08	8.317	A
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	340.29	340.29	0.00	-	-	-	-	-
C-B	29.36	29.42	0.00	561.35	0.052	0.06	6.770	A

Queue Variation Results for each time segment

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.27	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.35	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.10	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.50	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.13	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.51	0.00	0.00	0.00	1.00			N/A	N/A
D-BC	0.13	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.36	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.10	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:45-18:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.27	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.08	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.06	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue Variations cannot be calculated for crossroads.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, AM	2023 Base + Dev	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	A55J8 WESTBOUND	Crossroads	Two-way	A,B,C,D	13.97	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5025 E		Major
B	B	EB ON		Minor
C	C	A5025W		Major
D	D	EB Off		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	8.00		0.00		2.20	190.00	✓	1.00
C	8.00		0.00		2.20	180.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		5.00	5.00								40	115
D	Two lanes		4.70	4.54								40	79

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	683.994	-	-	-	-	-	-	0.242	0.346	0.242	-	-	-
1	B-A	656.963	0.109	0.276	0.276	-	-	-	0.174	0.394	-	0.276	0.276	0.138
1	B-C	835.763	0.117	0.296	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	656.963	0.109	0.276	0.276	-	-	-	0.174	0.394	0.174	-	-	-
1	B-D, offside lane	656.963	0.109	0.276	0.276	-	-	-	0.174	0.394	0.174	-	-	-
1	C-B	678.203	0.240	0.240	0.343	-	-	-	-	-	-	-	-	-
1	D-A	788.328	-	-	-	-	-	-	0.279	-	0.110	-	-	-
1	D-B, nearside lane	619.676	0.164	0.164	0.372	-	-	-	0.260	0.260	0.103	-	-	-
1	D-B, offside lane	611.194	0.162	0.162	0.367	-	-	-	0.257	0.257	0.102	-	-	-
1	D-C	611.194	-	0.162	0.367	0.128	0.257	0.257	0.257	0.257	0.102	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	699.00	100.000
B	ONE HOUR	✓	0.00	100.000
C	ONE HOUR	✓	371.40	100.000
D	ONE HOUR	✓	494.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	526.24	526.24		
07:45-08:00	B	0.00	0.00		
07:45-08:00	C	279.61	279.61		
07:45-08:00	D	371.91	371.91		
08:00-08:15	A	628.39	628.39		
08:00-08:15	B	0.00	0.00		
08:00-08:15	C	333.88	333.88		
08:00-08:15	D	444.10	444.10		
08:15-08:30	A	769.61	769.61		
08:15-08:30	B	0.00	0.00		
08:15-08:30	C	408.92	408.92		
08:15-08:30	D	543.90	543.90		
08:30-08:45	A	769.61	769.61		
08:30-08:45	B	0.00	0.00		
08:30-08:45	C	408.92	408.92		
08:30-08:45	D	543.90	543.90		
08:45-09:00	A	628.39	628.39		
08:45-09:00	B	0.00	0.00		
08:45-09:00	C	333.88	333.88		
08:45-09:00	D	444.10	444.10		
09:00-09:15	A	526.24	526.24		
09:00-09:15	B	0.00	0.00		
09:00-09:15	C	279.61	279.61		
09:00-09:15	D	371.91	371.91		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	317.000	382.000	0.000
	B	0.000	0.000	0.000	0.000
	C	341.400	30.000	0.000	0.000
	D	306.000	0.000	188.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.45	0.55	0.00
	B	0.25	0.25	0.25	0.25
	C	0.92	0.08	0.00	0.00
	D	0.62	0.00	0.38	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-CD	0.00	0.00	0.00	−1	A
B-AD	0.00	0.00	0.00	−1	A
A-BCD	0.00	0.00	0.00	−1	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	0.56	13.59	1.25	2.00	B
D-BC	0.47	15.56	0.88	2.00	C
C-D	-	-	-	-	-
C-A	-	-	-	-	-
C-B	0.07	7.82	0.07	−1	A

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	589.66	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	452.56	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	915.66	0.000	0.00	0.000	A
A-B	238.65	238.65	0.00	-	-	-	-	-
A-C	287.59	287.59	0.00	-	-	-	-	-
D-AB	230.37	228.28	0.00	665.21	0.346	0.52	8.201	A
D-BC	141.54	139.95	0.00	492.88	0.287	0.40	10.155	B
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	257.02	257.02	0.00	-	-	-	-	-
C-B	22.59	22.42	0.00	551.95	0.041	0.04	6.797	A

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	560.52	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	410.93	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	900.40	0.000	0.00	0.000	A
A-B	284.98	284.98	0.00	-	-	-	-	-
A-C	343.41	343.41	0.00	-	-	-	-	-
D-AB	275.09	274.21	0.00	638.96	0.431	0.74	9.844	A
D-BC	169.01	168.39	0.00	469.88	0.360	0.55	11.915	B
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	306.91	306.91	0.00	-	-	-	-	-
C-B	26.97	26.92	0.00	527.45	0.051	0.05	7.192	A

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	519.74	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	352.54	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	879.09	0.000	0.00	0.000	A
A-B	349.02	349.02	0.00	-	-	-	-	-
A-C	420.59	420.59	0.00	-	-	-	-	-
D-AB	336.91	334.96	0.00	601.91	0.560	1.23	13.384	B
D-BC	206.99	205.72	0.00	438.12	0.472	0.87	15.403	C
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	375.89	375.89	0.00	-	-	-	-	-
C-B	33.03	32.96	0.00	493.57	0.067	0.07	7.815	A

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	519.72	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	352.02	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	879.06	0.000	0.00	0.000	A
A-B	349.02	349.02	0.00	-	-	-	-	-
A-C	420.59	420.59	0.00	-	-	-	-	-
D-AB	336.91	336.83	0.00	601.42	0.560	1.25	13.593	B
D-BC	206.99	206.94	0.00	438.10	0.472	0.88	15.564	C
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	375.89	375.89	0.00	-	-	-	-	-
C-B	33.03	33.03	0.00	493.57	0.067	0.07	7.816	A

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	560.49	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	410.21	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	900.35	0.000	0.00	0.000	A
A-B	284.98	284.98	0.00	-	-	-	-	-
A-C	343.41	343.41	0.00	-	-	-	-	-
D-AB	275.09	277.01	0.00	638.23	0.431	0.77	10.020	B
D-BC	169.01	170.24	0.00	469.85	0.360	0.57	12.064	B
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	306.91	306.91	0.00	-	-	-	-	-
C-B	26.97	27.04	0.00	527.45	0.051	0.05	7.196	A

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	589.60	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	451.77	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	915.57	0.000	0.00	0.000	A
A-B	238.65	238.65	0.00	-	-	-	-	-
A-C	287.59	287.59	0.00	-	-	-	-	-
D-AB	230.37	231.31	0.00	664.37	0.347	0.54	8.330	A
D-BC	141.54	142.19	0.00	492.83	0.287	0.41	10.287	B
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	257.02	257.02	0.00	-	-	-	-	-
C-B	22.59	22.63	0.00	551.95	0.041	0.04	6.803	A

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.52	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.40	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.74	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.55	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	1.23	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.87	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	1.25	0.00	0.00	0.00	2.00			N/A	N/A
D-BC	0.88	0.00	0.00	0.00	2.00			N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.77	0.00	0.00	0.00	1.00			N/A	N/A
D-BC	0.57	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.54	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.41	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue Variations cannot be calculated for crossroads.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, PM	2023 Base + Dev	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	A55J8 WESTBOUND	Crossroads	Two-way	A,B,C,D	9.15	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5025 E		Major
B	B	EB ON		Minor
C	C	A5025W		Major
D	D	EB Off		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	8.00		0.00		2.20	190.00	✓	1.00
C	8.00		0.00		2.20	180.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		5.00	5.00								40	115
D	Two lanes		4.70	4.54								40	79

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	683.994	-	-	-	-	-	-	0.242	0.346	0.242	-	-	-
1	B-A	656.963	0.109	0.276	0.276	-	-	-	0.174	0.394	-	0.276	0.276	0.138
1	B-C	835.763	0.117	0.296	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	656.963	0.109	0.276	0.276	-	-	-	0.174	0.394	0.174	-	-	-
1	B-D, offside lane	656.963	0.109	0.276	0.276	-	-	-	0.174	0.394	0.174	-	-	-
1	C-B	678.203	0.240	0.240	0.343	-	-	-	-	-	-	-	-	-
1	D-A	788.328	-	-	-	-	-	-	0.279	-	0.110	-	-	-
1	D-B, nearside lane	619.676	0.164	0.164	0.372	-	-	-	0.260	0.260	0.103	-	-	-
1	D-B, offside lane	611.194	0.162	0.162	0.367	-	-	-	0.257	0.257	0.102	-	-	-
1	D-C	611.194	-	0.162	0.367	0.128	0.257	0.257	0.257	0.257	0.102	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	706.00	100.000
B	ONE HOUR	✓	0.00	100.000
C	ONE HOUR	✓	550.00	100.000
D	ONE HOUR	✓	236.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowinPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:30-16:45	A	531.51	531.51		
16:30-16:45	B	0.00	0.00		
16:30-16:45	C	414.07	414.07		
16:30-16:45	D	177.67	177.67		
16:45-17:00	A	634.68	634.68		
16:45-17:00	B	0.00	0.00		
16:45-17:00	C	494.44	494.44		
16:45-17:00	D	212.16	212.16		
17:00-17:15	A	777.32	777.32		
17:00-17:15	B	0.00	0.00		
17:00-17:15	C	605.56	605.56		
17:00-17:15	D	259.84	259.84		
17:15-17:30	A	777.32	777.32		
17:15-17:30	B	0.00	0.00		
17:15-17:30	C	605.56	605.56		
17:15-17:30	D	259.84	259.84		
17:30-17:45	A	634.68	634.68		
17:30-17:45	B	0.00	0.00		
17:30-17:45	C	494.44	494.44		
17:30-17:45	D	212.16	212.16		
17:45-18:00	A	531.51	531.51		
17:45-18:00	B	0.00	0.00		
17:45-18:00	C	414.07	414.07		
17:45-18:00	D	177.67	177.67		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	289.000	417.000	0.000
	B	0.000	0.000	0.000	0.000
	C	511.000	39.000	0.000	0.000
	D	193.000	0.000	43.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.41	0.59	0.00
	B	0.25	0.25	0.25	0.25
	C	0.93	0.07	0.00	0.00
	D	0.82	0.00	0.18	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-CD	0.00	0.00	0.00	−1	A
B-AD	0.00	0.00	0.00	−1	A
A-BCD	0.00	0.00	0.00	−1	A
A-B	-	-	-	-	-
A-C	-	-	-	-	-
D-AB	0.35	9.02	0.53	1.00	A
D-BC	0.12	10.78	0.14	−1	B
C-D	-	-	-	-	-
C-A	-	-	-	-	-
C-B	0.09	8.02	0.10	−1	A

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	566.56	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	444.68	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	878.18	0.000	0.00	0.000	A
A-B	217.57	217.57	0.00	-	-	-	-	-
A-C	313.94	313.94	0.00	-	-	-	-	-
D-AB	145.30	144.20	0.00	668.91	0.217	0.27	6.847	A
D-BC	32.37	32.07	0.00	454.08	0.071	0.08	8.524	A
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	384.71	384.71	0.00	-	-	-	-	-
C-B	29.36	29.14	0.00	550.69	0.053	0.06	6.899	A

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	532.18	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	402.78	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	854.99	0.000	0.00	0.000	A
A-B	259.81	259.81	0.00	-	-	-	-	-
A-C	374.87	374.87	0.00	-	-	-	-	-
D-AB	173.50	173.15	0.00	645.04	0.269	0.36	7.624	A
D-BC	38.66	38.56	0.00	423.53	0.091	0.10	9.349	A
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	459.38	459.38	0.00	-	-	-	-	-
C-B	35.06	35.00	0.00	525.94	0.067	0.07	7.332	A

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	483.57	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	344.70	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	822.37	0.000	0.00	0.000	A
A-B	318.19	318.19	0.00	-	-	-	-	-
A-C	459.13	459.13	0.00	-	-	-	-	-
D-AB	212.50	211.85	0.00	611.67	0.347	0.52	8.990	A
D-BC	47.34	47.18	0.00	381.35	0.124	0.14	10.767	B
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	562.62	562.62	0.00	-	-	-	-	-
C-B	42.94	42.84	0.00	491.72	0.087	0.09	8.018	A

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	483.54	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	344.54	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	822.33	0.000	0.00	0.000	A
A-B	318.19	318.19	0.00	-	-	-	-	-
A-C	459.13	459.13	0.00	-	-	-	-	-
D-AB	212.50	212.48	0.00	611.60	0.347	0.53	9.019	A
D-BC	47.34	47.34	0.00	381.33	0.124	0.14	10.778	B
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	562.62	562.62	0.00	-	-	-	-	-
C-B	42.94	42.94	0.00	491.72	0.087	0.10	8.021	A

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	532.14	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	402.53	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	854.93	0.000	0.00	0.000	A
A-B	259.81	259.81	0.00	-	-	-	-	-
A-C	374.87	374.87	0.00	-	-	-	-	-
D-AB	173.50	174.13	0.00	644.94	0.269	0.37	7.655	A
D-BC	38.66	38.81	0.00	423.49	0.091	0.10	9.363	A
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	459.38	459.38	0.00	-	-	-	-	-
C-B	35.06	35.15	0.00	525.94	0.067	0.07	7.335	A

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	0.00	0.00	0.00	566.48	0.000	0.00	0.000	A
B-AD	0.00	0.00	0.00	444.31	0.000	0.00	0.000	A
A-BCD	0.00	0.00	0.00	878.07	0.000	0.00	0.000	A
A-B	217.57	217.57	0.00	-	-	-	-	-
A-C	313.94	313.94	0.00	-	-	-	-	-
D-AB	145.30	145.67	0.00	668.75	0.217	0.28	6.889	A
D-BC	32.37	32.47	0.00	454.01	0.071	0.08	8.541	A
C-D	0.00	0.00	0.00	-	-	-	-	-
C-A	384.71	384.71	0.00	-	-	-	-	-
C-B	29.36	29.42	0.00	550.69	0.053	0.06	6.906	A

Queue Variation Results for each time segment

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.27	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.08	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.06	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.36	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.10	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.52	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.53	0.00	0.00	0.00	1.00			N/A	N/A
D-BC	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.10	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.37	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.10	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:45-18:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-CD	0.00	−1	−1	−1	−1			N/A	N/A
B-AD	0.00	−1	−1	−1	−1			N/A	N/A
A-BCD	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-
D-AB	0.28	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
D-BC	0.08	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-D	-	-	-	-	-	-	-	-	-
C-A	-	-	-	-	-	-	-	-	-
C-B	0.06	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Junctions 8

PICADY 8 - Priority Intersection Module

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Filename: A55J8_WB_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A55 J8\2018 DF
Report generation date: 14/06/2018 15:27:47

- » (Default Analysis Set) - 2017 Base, AM
- » (Default Analysis Set) - 2017 Base, PM
- » (Default Analysis Set) - 2023 Base, AM
- » (Default Analysis Set) - 2023 Base, PM
- » (Default Analysis Set) - 2023 Base + Dev, AM
- » (Default Analysis Set) - 2023 Base + Dev, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2017 Base								
Stream B-CD	0.05	6.67	0.04	A	0.23	8.00	0.19	A
Stream B-AD	0.85	15.61	0.46	C	3.45	36.62	0.79	E
Stream A-BCD	0.65	8.07	0.38	A	1.13	11.01	0.53	B
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
Stream D-AB	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream D-BC	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream C-D	-	-	-	-	-	-	-	-
Stream C-A	-	-	-	-	-	-	-	-
Stream C-B	0.00	0.00	0.00	A	0.00	0.00	0.00	A
A1 - 2023 Base								
Stream B-CD	0.05	6.84	0.05	A	0.25	8.37	0.20	A
Stream B-AD	1.00	17.32	0.51	C	4.85	49.44	0.85	E
Stream A-BCD	0.73	8.38	0.41	A	1.29	11.84	0.56	B
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
Stream D-AB	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream D-BC	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream C-D	-	-	-	-	-	-	-	-
Stream C-A	-	-	-	-	-	-	-	-
Stream C-B	0.00	0.00	0.00	A	0.00	0.00	0.00	A
A1 - 2023 Base + Dev								
Stream B-CD	0.05	7.19	0.05	A	0.26	8.76	0.21	A
Stream B-AD	1.87	25.07	0.66	D	14.30	119.25	1.00	F
Stream A-BCD	0.73	8.38	0.41	A	1.29	11.84	0.56	B
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
Stream D-AB	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream D-BC	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream C-D	-	-	-	-	-	-	-	-
Stream C-A	-	-	-	-	-	-	-	-
Stream C-B	0.00	0.00	0.00	A	0.00	0.00	0.00	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:30 - 18:00
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:30 - 18:00
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:30 - 18:00

Run using Junctions 8.0.6.541 at 14/06/2018 15:27:38

File summary

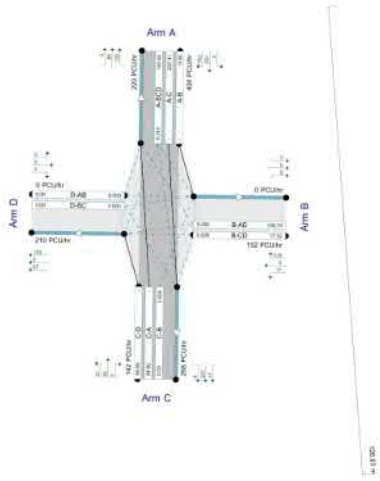
Title	(untitled)
Location	
Site Number	
Date	14/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, AM	2017 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	A55J8 WESTBOUND	Crossroads	Two-way	A,B,C,D	11.11	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5025 E		Major
B	B	WB OFF		Minor
C	C	A5025 W		Major
D	D	WB ON		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	8.00		0.00		2.20	200.00	✓	1.00
C	8.00		0.00		2.20	190.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		3.60	4.00								40	112
D	Two lanes		5.00	5.00								41	82

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	689.785	-	-	-	-	-	-	0.244	0.349	0.244	-	-	-
1	B-A	600.530	0.100	0.252	0.252	-	-	-	0.159	0.361	-	0.252	0.252	0.126
1	B-C	736.160	0.103	0.260	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	578.669	0.096	0.243	0.243	-	-	-	0.153	0.347	0.153	-	-	-
1	B-D, offside lane	600.530	0.100	0.252	0.252	-	-	-	0.159	0.361	0.159	-	-	-
1	C-B	683.994	0.242	0.242	0.346	-	-	-	-	-	-	-	-	-
1	D-A	810.828	-	-	-	-	-	-	0.287	-	0.113	-	-	-
1	D-B, nearside lane	637.773	0.169	0.169	0.383	-	-	-	0.268	0.268	0.106	-	-	-
1	D-B, offside lane	637.773	0.169	0.169	0.383	-	-	-	0.268	0.268	0.106	-	-	-
1	D-C	637.773	-	0.169	0.383	0.134	0.268	0.268	0.268	0.268	0.106	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	538.40	100.000
B	ONE HOUR	✓	204.70	100.000
C	ONE HOUR	✓	188.10	100.000
D	ONE HOUR	✓	0.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	405.34	405.34		
07:45-08:00	B	154.11	154.11		
07:45-08:00	C	141.61	141.61		
07:45-08:00	D	0.00	0.00		
08:00-08:15	A	484.01	484.01		
08:00-08:15	B	184.02	184.02		
08:00-08:15	C	169.10	169.10		
08:00-08:15	D	0.00	0.00		
08:15-08:30	A	592.79	592.79		
08:15-08:30	B	225.38	225.38		
08:15-08:30	C	207.10	207.10		
08:15-08:30	D	0.00	0.00		
08:30-08:45	A	592.79	592.79		
08:30-08:45	B	225.38	225.38		
08:30-08:45	C	207.10	207.10		
08:30-08:45	D	0.00	0.00		
08:45-09:00	A	484.01	484.01		
08:45-09:00	B	184.02	184.02		
08:45-09:00	C	169.10	169.10		
08:45-09:00	D	0.00	0.00		
09:00-09:15	A	405.34	405.34		
09:00-09:15	B	154.11	154.11		
09:00-09:15	C	141.61	141.61		
09:00-09:15	D	0.00	0.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	0.000	333.800	204.600
	B	181.700	0.000	23.000	0.000
	C	112.800	0.000	0.000	75.300
	D	0.000	0.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.00	0.62	0.38
	B	0.89	0.00	0.11	0.00
	C	0.60	0.00	0.00	0.40
	D	0.25	0.25	0.25	0.25

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.04	6.67	0.05	A
B-AD	0.46	15.61	0.85	C
A-BCD	0.38	8.07	0.65	A
A-B	-	-	-	-
A-C	-	-	-	-
D-AB	0.00	0.00	0.00	A
D-BC	0.00	0.00	0.00	A
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	17.32	17.20	0.00	623.40	0.028	0.03	5.939	A
B-AD	136.79	135.25	0.00	484.73	0.282	0.39	10.257	B
A-BCD	167.92	166.60	0.00	691.61	0.243	0.33	6.841	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	237.41	237.41	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	615.02	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	495.87	0.000	0.00	0.000	A
C-D	56.69	56.69	0.00	-	-	-	-	-
C-A	84.92	84.92	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	569.95	0.000	0.00	0.000	A

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	20.68	20.65	0.00	599.27	0.035	0.04	6.221	A
B-AD	163.34	162.75	0.00	461.92	0.354	0.54	12.006	B
A-BCD	208.07	207.63	0.00	700.51	0.297	0.44	7.301	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	275.94	275.94	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	593.99	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	467.64	0.000	0.00	0.000	A
C-D	67.69	67.69	0.00	-	-	-	-	-
C-A	101.40	101.40	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	547.37	0.000	0.00	0.000	A

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	25.32	25.28	0.00	565.24	0.045	0.05	6.666	A
B-AD	200.06	198.84	0.00	430.74	0.464	0.84	15.439	C
A-BCD	270.91	270.11	0.00	717.16	0.378	0.64	8.044	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	321.88	321.88	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	564.35	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	429.18	0.000	0.00	0.000	A
C-D	82.91	82.91	0.00	-	-	-	-	-
C-A	124.20	124.20	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	516.62	0.000	0.00	0.000	A

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	25.32	25.32	0.00	564.70	0.045	0.05	6.673	A
B-AD	200.06	200.00	0.00	430.53	0.465	0.85	15.607	C
A-BCD	270.91	270.88	0.00	717.16	0.378	0.65	8.071	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	321.88	321.88	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	564.14	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	428.82	0.000	0.00	0.000	A
C-D	82.91	82.91	0.00	-	-	-	-	-
C-A	124.20	124.20	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	516.36	0.000	0.00	0.000	A

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	20.68	20.72	0.00	598.48	0.035	0.04	6.233	A
B-AD	163.34	164.53	0.00	461.60	0.354	0.56	12.165	B
A-BCD	208.07	208.84	0.00	700.51	0.297	0.45	7.338	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	275.94	275.94	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	593.67	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	467.08	0.000	0.00	0.000	A
C-D	67.69	67.69	0.00	-	-	-	-	-
C-A	101.40	101.40	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	546.96	0.000	0.00	0.000	A

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	17.32	17.34	0.00	622.53	0.028	0.03	5.950	A
B-AD	136.79	137.43	0.00	484.27	0.282	0.40	10.398	B
A-BCD	167.92	168.38	0.00	691.61	0.243	0.34	6.889	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	237.41	237.41	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	614.54	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	495.05	0.000	0.00	0.000	A
C-D	56.69	56.69	0.00	-	-	-	-	-
C-A	84.92	84.92	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	569.34	0.000	0.00	0.000	A

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, PM	2017 Base	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	A55J8 WESTBOUND	Crossroads	Two-way	A,B,C,D	21.88	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5025 E		Major
B	B	WB OFF		Minor
C	C	A5025 W		Major
D	D	WB ON		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	8.00		0.00		2.20	200.00	✓	1.00
C	8.00		0.00		2.20	190.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		3.60	4.00								40	112
D	Two lanes		5.00	5.00								41	82

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	689.785	-	-	-	-	-	-	0.244	0.349	0.244	-	-	-
1	B-A	600.530	0.100	0.252	0.252	-	-	-	0.159	0.361	-	0.252	0.252	0.126
1	B-C	736.160	0.103	0.260	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	578.669	0.096	0.243	0.243	-	-	-	0.153	0.347	0.153	-	-	-
1	B-D, offside lane	600.530	0.100	0.252	0.252	-	-	-	0.159	0.361	0.159	-	-	-
1	C-B	683.994	0.242	0.242	0.346	-	-	-	-	-	-	-	-	-
1	D-A	810.828	-	-	-	-	-	-	0.287	-	0.113	-	-	-
1	D-B, nearside lane	637.773	0.169	0.169	0.383	-	-	-	0.268	0.268	0.106	-	-	-
1	D-B, offside lane	637.773	0.169	0.169	0.383	-	-	-	0.268	0.268	0.106	-	-	-
1	D-C	637.773	-	0.169	0.383	0.134	0.268	0.268	0.268	0.268	0.106	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	436.10	100.000
B	ONE HOUR	✓	419.80	100.000
C	ONE HOUR	✓	173.30	100.000
D	ONE HOUR	✓	0.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:30-16:45	A	328.32	328.32		
16:30-16:45	B	316.05	316.05		
16:30-16:45	C	130.47	130.47		
16:30-16:45	D	0.00	0.00		
16:45-17:00	A	392.04	392.04		
16:45-17:00	B	377.39	377.39		
16:45-17:00	C	155.79	155.79		
16:45-17:00	D	0.00	0.00		
17:00-17:15	A	480.16	480.16		
17:00-17:15	B	462.21	462.21		
17:00-17:15	C	190.81	190.81		
17:00-17:15	D	0.00	0.00		
17:15-17:30	A	480.16	480.16		
17:15-17:30	B	462.21	462.21		
17:15-17:30	C	190.81	190.81		
17:15-17:30	D	0.00	0.00		
17:30-17:45	A	392.04	392.04		
17:30-17:45	B	377.39	377.39		
17:30-17:45	C	155.79	155.79		
17:30-17:45	D	0.00	0.00		
17:45-18:00	A	328.32	328.32		
17:45-18:00	B	316.05	316.05		
17:45-18:00	C	130.47	130.47		
17:45-18:00	D	0.00	0.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	0.000	140.900	295.200
	B	325.800	0.000	94.000	0.000
	C	139.300	0.000	0.000	34.000
	D	0.000	0.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.00	0.32	0.68
	B	0.78	0.00	0.22	0.00
	C	0.80	0.00	0.00	0.20
	D	0.25	0.25	0.25	0.25

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.19	8.00	0.23	A
B-AD	0.79	36.62	3.45	E
A-BCD	0.53	11.01	1.13	B
A-B	-	-	-	-
A-C	-	-	-	-
D-AB	0.00	0.00	0.00	A
D-BC	0.00	0.00	0.00	A
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	70.77	70.26	0.00	621.82	0.114	0.13	6.522	A
B-AD	245.28	241.56	0.00	501.01	0.490	0.93	13.691	B
A-BCD	234.34	232.23	0.00	680.24	0.345	0.53	8.000	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	93.97	93.97	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	611.63	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	476.62	0.000	0.00	0.000	A
C-D	25.60	25.60	0.00	-	-	-	-	-
C-A	104.87	104.87	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	581.51	0.000	0.00	0.000	A

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	84.50	84.36	0.00	594.78	0.142	0.16	7.051	A
B-AD	292.89	290.68	0.00	481.15	0.609	1.48	18.689	C
A-BCD	286.38	285.59	0.00	683.75	0.419	0.73	9.027	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	105.67	105.67	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	589.64	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	443.72	0.000	0.00	0.000	A
C-D	30.57	30.57	0.00	-	-	-	-	-
C-A	125.23	125.23	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	560.90	0.000	0.00	0.000	A

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	103.50	103.25	0.00	556.09	0.186	0.23	7.946	A
B-AD	358.71	351.75	0.00	454.24	0.790	3.22	33.024	D
A-BCD	364.63	363.08	0.00	691.50	0.527	1.11	10.916	B
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	115.52	115.52	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	558.83	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	398.93	0.000	0.00	0.000	A
C-D	37.43	37.43	0.00	-	-	-	-	-
C-A	153.37	153.37	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	533.13	0.000	0.00	0.000	A

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	103.50	103.49	0.00	553.25	0.187	0.23	8.004	A
B-AD	358.71	357.78	0.00	453.85	0.790	3.45	36.622	E
A-BCD	364.63	364.57	0.00	691.50	0.527	1.13	11.012	B
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	115.52	115.52	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	558.40	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	397.79	0.000	0.00	0.000	A
C-D	37.43	37.43	0.00	-	-	-	-	-
C-A	153.37	153.37	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	532.62	0.000	0.00	0.000	A

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	84.50	84.74	0.00	590.87	0.143	0.17	7.118	A
B-AD	292.89	300.14	0.00	480.55	0.609	1.64	20.675	C
A-BCD	286.38	287.87	0.00	683.75	0.419	0.76	9.133	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	105.67	105.67	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	589.00	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	442.04	0.000	0.00	0.000	A
C-D	30.57	30.57	0.00	-	-	-	-	-
C-A	125.23	125.23	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	560.11	0.000	0.00	0.000	A

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	70.77	70.92	0.00	619.31	0.114	0.13	6.568	A
B-AD	245.28	247.88	0.00	500.24	0.490	0.99	14.407	B
A-BCD	234.34	235.18	0.00	680.24	0.345	0.55	8.105	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	93.97	93.97	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	610.82	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	474.92	0.000	0.00	0.000	A
C-D	25.60	25.60	0.00	-	-	-	-	-
C-A	104.87	104.87	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	580.49	0.000	0.00	0.000	A

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, AM	2023 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	A55J8 WESTBOUND	Crossroads	Two-way	A,B,C,D	11.97	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5025 E		Major
B	B	WB OFF		Minor
C	C	A5025 W		Major
D	D	WB ON		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	8.00		0.00		2.20	200.00	✓	1.00
C	8.00		0.00		2.20	190.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		3.60	4.00								40	112
D	Two lanes		5.00	5.00								41	82

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	689.785	-	-	-	-	-	-	0.244	0.349	0.244	-	-	-
1	B-A	600.530	0.100	0.252	0.252	-	-	-	0.159	0.361	-	0.252	0.252	0.126
1	B-C	736.160	0.103	0.260	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	578.669	0.096	0.243	0.243	-	-	-	0.153	0.347	0.153	-	-	-
1	B-D, offside lane	600.530	0.100	0.252	0.252	-	-	-	0.159	0.361	0.159	-	-	-
1	C-B	683.994	0.242	0.242	0.346	-	-	-	-	-	-	-	-	-
1	D-A	810.828	-	-	-	-	-	-	0.287	-	0.113	-	-	-
1	D-B, nearside lane	637.773	0.169	0.169	0.383	-	-	-	0.268	0.268	0.106	-	-	-
1	D-B, offside lane	637.773	0.169	0.169	0.383	-	-	-	0.268	0.268	0.106	-	-	-
1	D-C	637.773	-	0.169	0.383	0.134	0.268	0.268	0.268	0.268	0.106	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	571.00	100.000
B	ONE HOUR	✓	217.00	100.000
C	ONE HOUR	✓	200.00	100.000
D	ONE HOUR	✓	0.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	429.88	429.88		
07:45-08:00	B	163.37	163.37		
07:45-08:00	C	150.57	150.57		
07:45-08:00	D	0.00	0.00		
08:00-08:15	A	513.32	513.32		
08:00-08:15	B	195.08	195.08		
08:00-08:15	C	179.80	179.80		
08:00-08:15	D	0.00	0.00		
08:15-08:30	A	628.68	628.68		
08:15-08:30	B	238.92	238.92		
08:15-08:30	C	220.20	220.20		
08:15-08:30	D	0.00	0.00		
08:30-08:45	A	628.68	628.68		
08:30-08:45	B	238.92	238.92		
08:30-08:45	C	220.20	220.20		
08:30-08:45	D	0.00	0.00		
08:45-09:00	A	513.32	513.32		
08:45-09:00	B	195.08	195.08		
08:45-09:00	C	179.80	179.80		
08:45-09:00	D	0.00	0.00		
09:00-09:15	A	429.88	429.88		
09:00-09:15	B	163.37	163.37		
09:00-09:15	C	150.57	150.57		
09:00-09:15	D	0.00	0.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	0.000	354.000	217.000
	B	193.000	0.000	24.000	0.000
	C	120.000	0.000	0.000	80.000
	D	0.000	0.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.00	0.62	0.38
	B	0.89	0.00	0.11	0.00
	C	0.60	0.00	0.00	0.40
	D	0.25	0.25	0.25	0.25

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.05	6.84	0.05	A
B-AD	0.51	17.32	1.00	C
A-BCD	0.41	8.38	0.73	A
A-B	-	-	-	-
A-C	-	-	-	-
D-AB	0.00	0.00	0.00	A
D-BC	0.00	0.00	0.00	A
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	18.07	17.95	0.00	616.05	0.029	0.03	6.017	A
B-AD	145.30	143.58	0.00	477.68	0.304	0.43	10.722	B
A-BCD	180.05	178.60	0.00	694.01	0.259	0.36	6.967	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	249.83	249.83	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	608.54	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	487.20	0.000	0.00	0.000	A
C-D	60.23	60.23	0.00	-	-	-	-	-
C-A	90.34	90.34	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	563.04	0.000	0.00	0.000	A

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	21.58	21.54	0.00	590.15	0.037	0.04	6.330	A
B-AD	173.50	172.80	0.00	453.47	0.383	0.61	12.792	B
A-BCD	224.11	223.60	0.00	704.42	0.318	0.49	7.482	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	289.21	289.21	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	586.00	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	457.21	0.000	0.00	0.000	A
C-D	71.92	71.92	0.00	-	-	-	-	-
C-A	107.88	107.88	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	539.08	0.000	0.00	0.000	A

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	26.42	26.38	0.00	553.48	0.048	0.05	6.829	A
B-AD	212.50	210.98	0.00	420.37	0.506	0.99	17.066	C
A-BCD	293.92	292.98	0.00	723.61	0.406	0.72	8.350	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	334.77	334.77	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	554.16	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	416.36	0.000	0.00	0.000	A
C-D	88.08	88.08	0.00	-	-	-	-	-
C-A	132.12	132.12	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	506.46	0.000	0.00	0.000	A

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	26.42	26.42	0.00	552.80	0.048	0.05	6.838	A
B-AD	212.50	212.43	0.00	420.13	0.506	1.00	17.315	C
A-BCD	293.92	293.88	0.00	723.61	0.406	0.73	8.385	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	334.77	334.77	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	553.92	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	415.94	0.000	0.00	0.000	A
C-D	88.08	88.08	0.00	-	-	-	-	-
C-A	132.12	132.12	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	506.16	0.000	0.00	0.000	A

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	21.58	21.62	0.00	589.17	0.037	0.04	6.342	A
B-AD	173.50	174.98	0.00	453.09	0.383	0.63	13.011	B
A-BCD	224.11	225.01	0.00	704.42	0.318	0.51	7.526	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	289.21	289.21	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	585.63	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	456.56	0.000	0.00	0.000	A
C-D	71.92	71.92	0.00	-	-	-	-	-
C-A	107.88	107.88	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	538.61	0.000	0.00	0.000	A

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	18.07	18.10	0.00	615.05	0.029	0.03	6.030	A
B-AD	145.30	146.06	0.00	477.17	0.305	0.45	10.899	B
A-BCD	180.05	180.58	0.00	694.01	0.259	0.37	7.022	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	249.83	249.83	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	608.00	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	486.28	0.000	0.00	0.000	A
C-D	60.23	60.23	0.00	-	-	-	-	-
C-A	90.34	90.34	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	562.37	0.000	0.00	0.000	A

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, PM	2023 Base	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	A55J8 WESTBOUND	Crossroads	Two-way	A,B,C,D	27.85	D

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5025 E		Major
B	B	WB OFF		Minor
C	C	A5025 W		Major
D	D	WB ON		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	8.00		0.00		2.20	200.00	✓	1.00
C	8.00		0.00		2.20	190.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		3.60	4.00								40	112
D	Two lanes		5.00	5.00								41	82

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	689.785	-	-	-	-	-	-	0.244	0.349	0.244	-	-	-
1	B-A	600.530	0.100	0.252	0.252	-	-	-	0.159	0.361	-	0.252	0.252	0.126
1	B-C	736.160	0.103	0.260	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	578.669	0.096	0.243	0.243	-	-	-	0.153	0.347	0.153	-	-	-
1	B-D, offside lane	600.530	0.100	0.252	0.252	-	-	-	0.159	0.361	0.159	-	-	-
1	C-B	683.994	0.242	0.242	0.346	-	-	-	-	-	-	-	-	-
1	D-A	810.828	-	-	-	-	-	-	0.287	-	0.113	-	-	-
1	D-B, nearside lane	637.773	0.169	0.169	0.383	-	-	-	0.268	0.268	0.106	-	-	-
1	D-B, offside lane	637.773	0.169	0.169	0.383	-	-	-	0.268	0.268	0.106	-	-	-
1	D-C	637.773	-	0.169	0.383	0.134	0.268	0.268	0.268	0.268	0.106	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	461.00	100.000
B	ONE HOUR	✓	443.00	100.000
C	ONE HOUR	✓	183.00	100.000
D	ONE HOUR	✓	0.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:30-16:45	A	347.06	347.06		
16:30-16:45	B	333.51	333.51		
16:30-16:45	C	137.77	137.77		
16:30-16:45	D	0.00	0.00		
16:45-17:00	A	414.43	414.43		
16:45-17:00	B	398.25	398.25		
16:45-17:00	C	164.51	164.51		
16:45-17:00	D	0.00	0.00		
17:00-17:15	A	507.57	507.57		
17:00-17:15	B	487.75	487.75		
17:00-17:15	C	201.49	201.49		
17:00-17:15	D	0.00	0.00		
17:15-17:30	A	507.57	507.57		
17:15-17:30	B	487.75	487.75		
17:15-17:30	C	201.49	201.49		
17:15-17:30	D	0.00	0.00		
17:30-17:45	A	414.43	414.43		
17:30-17:45	B	398.25	398.25		
17:30-17:45	C	164.51	164.51		
17:30-17:45	D	0.00	0.00		
17:45-18:00	A	347.06	347.06		
17:45-18:00	B	333.51	333.51		
17:45-18:00	C	137.77	137.77		
17:45-18:00	D	0.00	0.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	0.000	149.000	312.000
	B	344.000	0.000	99.000	0.000
	C	147.000	0.000	0.000	36.000
	D	0.000	0.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.00	0.32	0.68
	B	0.78	0.00	0.22	0.00
	C	0.80	0.00	0.00	0.20
	D	0.25	0.25	0.25	0.25

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.20	8.37	0.25	A
B-AD	0.85	49.44	4.85	E
A-BCD	0.56	11.84	1.29	B
A-B	-	-	-	-
A-C	-	-	-	-
D-AB	0.00	0.00	0.00	A
D-BC	0.00	0.00	0.00	A
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	74.53	73.98	0.00	614.55	0.121	0.14	6.652	A
B-AD	258.98	254.75	0.00	495.35	0.523	1.06	14.720	B
A-BCD	249.26	246.94	0.00	681.13	0.366	0.58	8.250	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	97.80	97.80	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	605.46	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	467.42	0.000	0.00	0.000	A
C-D	27.10	27.10	0.00	-	-	-	-	-
C-A	110.67	110.67	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	575.66	0.000	0.00	0.000	A

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	89.00	88.84	0.00	585.39	0.152	0.18	7.248	A
B-AD	309.25	306.43	0.00	474.35	0.652	1.76	21.071	C
A-BCD	305.45	304.54	0.00	685.45	0.446	0.81	9.432	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	108.98	108.98	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	581.99	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	432.54	0.000	0.00	0.000	A
C-D	32.36	32.36	0.00	-	-	-	-	-
C-A	132.15	132.15	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	553.85	0.000	0.00	0.000	A

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	109.00	108.72	0.00	543.39	0.201	0.25	8.277	A
B-AD	378.75	368.40	0.00	445.89	0.849	4.35	41.690	E
A-BCD	390.69	388.83	0.00	694.64	0.562	1.27	11.706	B
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	116.88	116.88	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	549.04	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	385.00	0.000	0.00	0.000	A
C-D	39.64	39.64	0.00	-	-	-	-	-
C-A	161.85	161.85	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	524.47	0.000	0.00	0.000	A

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	109.00	108.99	0.00	539.13	0.202	0.25	8.369	A
B-AD	378.75	376.75	0.00	445.43	0.850	4.85	49.444	E
A-BCD	390.69	390.61	0.00	694.64	0.562	1.29	11.840	B
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	116.88	116.88	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	548.52	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	383.46	0.000	0.00	0.000	A
C-D	39.64	39.64	0.00	-	-	-	-	-
C-A	161.85	161.85	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	523.87	0.000	0.00	0.000	A

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	89.00	89.27	0.00	579.49	0.154	0.18	7.349	A
B-AD	309.25	320.63	0.00	473.63	0.653	2.01	25.014	D
A-BCD	305.45	307.24	0.00	685.45	0.446	0.85	9.568	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	108.98	108.98	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	581.23	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	430.30	0.000	0.00	0.000	A
C-D	32.36	32.36	0.00	-	-	-	-	-
C-A	132.15	132.15	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	552.91	0.000	0.00	0.000	A

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	74.53	74.71	0.00	611.46	0.122	0.14	6.708	A
B-AD	258.98	262.46	0.00	494.50	0.524	1.14	15.736	C
A-BCD	249.26	250.24	0.00	681.13	0.366	0.60	8.376	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	97.80	97.80	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	604.54	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	465.47	0.000	0.00	0.000	A
C-D	27.10	27.10	0.00	-	-	-	-	-
C-A	110.67	110.67	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	574.52	0.000	0.00	0.000	A

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, AM	2023 Base + Dev	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	A55J8 WESTBOUND	Crossroads	Two-way	A,B,C,D	16.27	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5025 E		Major
B	B	WB OFF		Minor
C	C	A5025 W		Major
D	D	WB ON		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	8.00		0.00		2.20	200.00	✓	1.00
C	8.00		0.00		2.20	190.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		3.60	4.00								40	112
D	Two lanes		5.00	5.00								41	82

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	689.785	-	-	-	-	-	-	0.244	0.349	0.244	-	-	-
1	B-A	600.530	0.100	0.252	0.252	-	-	-	0.159	0.361	-	0.252	0.252	0.126
1	B-C	736.160	0.103	0.260	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	578.669	0.096	0.243	0.243	-	-	-	0.153	0.347	0.153	-	-	-
1	B-D, offside lane	600.530	0.100	0.252	0.252	-	-	-	0.159	0.361	0.159	-	-	-
1	C-B	683.994	0.242	0.242	0.346	-	-	-	-	-	-	-	-	-
1	D-A	810.828	-	-	-	-	-	-	0.287	-	0.113	-	-	-
1	D-B, nearside lane	637.773	0.169	0.169	0.383	-	-	-	0.268	0.268	0.106	-	-	-
1	D-B, offside lane	637.773	0.169	0.169	0.383	-	-	-	0.268	0.268	0.106	-	-	-
1	D-C	637.773	-	0.169	0.383	0.134	0.268	0.268	0.268	0.268	0.106	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	571.00	100.000
B	ONE HOUR	✓	275.90	100.000
C	ONE HOUR	✓	200.00	100.000
D	ONE HOUR	✓	0.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	429.88	429.88		
07:45-08:00	B	207.71	207.71		
07:45-08:00	C	150.57	150.57		
07:45-08:00	D	0.00	0.00		
08:00-08:15	A	513.32	513.32		
08:00-08:15	B	248.03	248.03		
08:00-08:15	C	179.80	179.80		
08:00-08:15	D	0.00	0.00		
08:15-08:30	A	628.68	628.68		
08:15-08:30	B	303.77	303.77		
08:15-08:30	C	220.20	220.20		
08:15-08:30	D	0.00	0.00		
08:30-08:45	A	628.68	628.68		
08:30-08:45	B	303.77	303.77		
08:30-08:45	C	220.20	220.20		
08:30-08:45	D	0.00	0.00		
08:45-09:00	A	513.32	513.32		
08:45-09:00	B	248.03	248.03		
08:45-09:00	C	179.80	179.80		
08:45-09:00	D	0.00	0.00		
09:00-09:15	A	429.88	429.88		
09:00-09:15	B	207.71	207.71		
09:00-09:15	C	150.57	150.57		
09:00-09:15	D	0.00	0.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	0.000	354.000	217.000
	B	252.000	0.000	23.900	0.000
	C	120.000	0.000	0.000	80.000
	D	0.000	0.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.00	0.62	0.38
	B	0.91	0.00	0.09	0.00
	C	0.60	0.00	0.00	0.40
	D	0.25	0.25	0.25	0.25

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.05	7.19	0.05	A
B-AD	0.66	25.07	1.87	D
A-BCD	0.41	8.38	0.73	A
A-B	-	-	-	-
A-C	-	-	-	-
D-AB	0.00	0.00	0.00	A
D-BC	0.00	0.00	0.00	A
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	17.99	17.87	0.00	600.55	0.030	0.03	6.176	A
B-AD	189.72	187.14	0.00	477.68	0.397	0.64	12.286	B
A-BCD	180.05	178.60	0.00	694.01	0.259	0.36	6.967	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	249.83	249.83	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	608.54	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	484.06	0.000	0.00	0.000	A
C-D	60.23	60.23	0.00	-	-	-	-	-
C-A	90.34	90.34	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	563.04	0.000	0.00	0.000	A

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	21.49	21.45	0.00	570.74	0.038	0.04	6.553	A
B-AD	226.54	225.25	0.00	453.47	0.500	0.97	15.681	C
A-BCD	224.11	223.60	0.00	704.42	0.318	0.49	7.482	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	289.21	289.21	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	586.00	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	453.34	0.000	0.00	0.000	A
C-D	71.92	71.92	0.00	-	-	-	-	-
C-A	107.88	107.88	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	539.08	0.000	0.00	0.000	A

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	26.31	26.26	0.00	528.42	0.050	0.05	7.168	A
B-AD	277.46	274.10	0.00	420.37	0.660	1.81	24.055	C
A-BCD	293.92	292.98	0.00	723.61	0.406	0.72	8.350	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	334.77	334.77	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	554.16	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	411.48	0.000	0.00	0.000	A
C-D	88.08	88.08	0.00	-	-	-	-	-
C-A	132.12	132.12	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	506.46	0.000	0.00	0.000	A

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	26.31	26.31	0.00	527.03	0.050	0.05	7.188	A
B-AD	277.46	277.20	0.00	420.13	0.660	1.87	25.066	D
A-BCD	293.92	293.88	0.00	723.61	0.406	0.73	8.385	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	334.77	334.77	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	553.92	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	410.92	0.000	0.00	0.000	A
C-D	88.08	88.08	0.00	-	-	-	-	-
C-A	132.12	132.12	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	506.16	0.000	0.00	0.000	A

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	21.49	21.54	0.00	568.81	0.038	0.04	6.580	A
B-AD	226.54	229.89	0.00	453.09	0.500	1.03	16.360	C
A-BCD	224.11	225.01	0.00	704.42	0.318	0.51	7.526	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	289.21	289.21	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	585.63	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	452.50	0.000	0.00	0.000	A
C-D	71.92	71.92	0.00	-	-	-	-	-
C-A	107.88	107.88	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	538.61	0.000	0.00	0.000	A

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	17.99	18.03	0.00	598.98	0.030	0.03	6.198	A
B-AD	189.72	191.15	0.00	477.17	0.398	0.67	12.651	B
A-BCD	180.05	180.58	0.00	694.01	0.259	0.37	7.022	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	249.83	249.83	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	608.00	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	483.03	0.000	0.00	0.000	A
C-D	60.23	60.23	0.00	-	-	-	-	-
C-A	90.34	90.34	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	562.37	0.000	0.00	0.000	A

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, PM	2023 Base + Dev	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	A55J8 WESTBOUND	Crossroads	Two-way	A,B,C,D	62.68	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5025 E		Major
B	B	WB OFF		Minor
C	C	A5025 W		Major
D	D	WB ON		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	8.00		0.00		2.20	200.00	✓	1.00
C	8.00		0.00		2.20	190.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	Two lanes		3.60	4.00								40	112
D	Two lanes		5.00	5.00								41	82

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	689.785	-	-	-	-	-	-	0.244	0.349	0.244	-	-	-
1	B-A	600.530	0.100	0.252	0.252	-	-	-	0.159	0.361	-	0.252	0.252	0.126
1	B-C	736.160	0.103	0.260	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	578.669	0.096	0.243	0.243	-	-	-	0.153	0.347	0.153	-	-	-
1	B-D, offside lane	600.530	0.100	0.252	0.252	-	-	-	0.159	0.361	0.159	-	-	-
1	C-B	683.994	0.242	0.242	0.346	-	-	-	-	-	-	-	-	-
1	D-A	810.828	-	-	-	-	-	-	0.287	-	0.113	-	-	-
1	D-B, nearside lane	637.773	0.169	0.169	0.383	-	-	-	0.268	0.268	0.106	-	-	-
1	D-B, offside lane	637.773	0.169	0.169	0.383	-	-	-	0.268	0.268	0.106	-	-	-
1	D-C	637.773	-	0.169	0.383	0.134	0.268	0.268	0.268	0.268	0.106	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	461.00	100.000
B	ONE HOUR	✓	502.00	100.000
C	ONE HOUR	✓	183.00	100.000
D	ONE HOUR	✓	0.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:30-16:45	A	347.06	347.06		
16:30-16:45	B	377.93	377.93		
16:30-16:45	C	137.77	137.77		
16:30-16:45	D	0.00	0.00		
16:45-17:00	A	414.43	414.43		
16:45-17:00	B	451.29	451.29		
16:45-17:00	C	164.51	164.51		
16:45-17:00	D	0.00	0.00		
17:00-17:15	A	507.57	507.57		
17:00-17:15	B	552.71	552.71		
17:00-17:15	C	201.49	201.49		
17:00-17:15	D	0.00	0.00		
17:15-17:30	A	507.57	507.57		
17:15-17:30	B	552.71	552.71		
17:15-17:30	C	201.49	201.49		
17:15-17:30	D	0.00	0.00		
17:30-17:45	A	414.43	414.43		
17:30-17:45	B	451.29	451.29		
17:30-17:45	C	164.51	164.51		
17:30-17:45	D	0.00	0.00		
17:45-18:00	A	347.06	347.06		
17:45-18:00	B	377.93	377.93		
17:45-18:00	C	137.77	137.77		
17:45-18:00	D	0.00	0.00		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.000	0.000	149.000	312.000
	B	403.000	0.000	99.000	0.000
	C	147.000	0.000	0.000	36.000
	D	0.000	0.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.00	0.00	0.32	0.68
	B	0.80	0.00	0.20	0.00
	C	0.80	0.00	0.00	0.20
	D	0.25	0.25	0.25	0.25

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		A	B	C	D
From	A	0.0	0.0	0.0	0.0
	B	0.0	0.0	0.0	0.0
	C	0.0	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.21	8.76	0.26	A
B-AD	1.00	119.25	14.30	F
A-BCD	0.56	11.84	1.29	B
A-B	-	-	-	-
A-C	-	-	-	-
D-AB	0.00	0.00	0.00	A
D-BC	0.00	0.00	0.00	A
C-D	-	-	-	-
C-A	-	-	-	-
C-B	0.00	0.00	0.00	A

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	74.53	73.97	0.00	598.70	0.124	0.14	6.853	A
B-AD	303.40	297.39	0.00	495.35	0.612	1.50	17.697	C
A-BCD	249.26	246.94	0.00	681.13	0.366	0.58	8.250	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	97.80	97.80	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	605.46	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	464.07	0.000	0.00	0.000	A
C-D	27.10	27.10	0.00	-	-	-	-	-
C-A	110.67	110.67	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	575.66	0.000	0.00	0.000	A

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	89.00	88.82	0.00	565.13	0.157	0.19	7.557	A
B-AD	362.29	356.83	0.00	474.35	0.764	2.87	29.288	D
A-BCD	305.45	304.54	0.00	685.45	0.446	0.81	9.432	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	108.98	108.98	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	581.99	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	428.25	0.000	0.00	0.000	A
C-D	32.36	32.36	0.00	-	-	-	-	-
C-A	132.15	132.15	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	553.85	0.000	0.00	0.000	A

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	109.00	108.69	0.00	520.03	0.210	0.26	8.746	A
B-AD	443.71	414.05	0.00	445.89	0.995	10.28	76.506	F
A-BCD	390.69	388.83	0.00	694.64	0.562	1.27	11.706	B
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	116.88	116.88	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	549.04	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	379.25	0.000	0.00	0.000	A
C-D	39.64	39.64	0.00	-	-	-	-	-
C-A	161.85	161.85	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	524.47	0.000	0.00	0.000	A

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	109.00	108.99	0.00	519.96	0.210	0.26	8.759	A
B-AD	443.71	427.62	0.00	445.43	0.996	14.30	119.254	F
A-BCD	390.69	390.61	0.00	694.64	0.562	1.29	11.840	B
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	116.88	116.88	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	548.52	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	376.06	0.000	0.00	0.000	A
C-D	39.64	39.64	0.00	-	-	-	-	-
C-A	161.85	161.85	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	523.87	0.000	0.00	0.000	A

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	89.00	89.27	0.00	545.87	0.163	0.20	7.890	A
B-AD	362.29	404.18	0.00	473.63	0.765	3.83	63.989	F
A-BCD	305.45	307.24	0.00	685.45	0.446	0.85	9.568	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	108.98	108.98	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	581.23	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	423.10	0.000	0.00	0.000	A
C-D	32.36	32.36	0.00	-	-	-	-	-
C-A	132.15	132.15	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	552.91	0.000	0.00	0.000	A

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-CD	74.53	74.74	0.00	592.97	0.126	0.15	6.951	A
B-AD	303.40	312.05	0.00	494.50	0.614	1.67	20.565	C
A-BCD	249.26	250.24	0.00	681.13	0.366	0.60	8.376	A
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	97.80	97.80	0.00	-	-	-	-	-
D-AB	0.00	0.00	0.00	604.54	0.000	0.00	0.000	A
D-BC	0.00	0.00	0.00	461.54	0.000	0.00	0.000	A
C-D	27.10	27.10	0.00	-	-	-	-	-
C-A	110.67	110.67	0.00	-	-	-	-	-
C-B	0.00	0.00	0.00	574.52	0.000	0.00	0.000	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: FOUR_CROSSES_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\Four Crosses
Report generation date: 14/06/2018 15:44:16

» (Default Analysis Set) - 2017 Base, AM
» (Default Analysis Set) - 2017 Base, PM
» (Default Analysis Set) - 2023 Base, AM
» (Default Analysis Set) - 2023 Base, PM
» (Default Analysis Set) - 2023 Base + Dev, AM
» (Default Analysis Set) - 2023 Base + Dev, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2017 Base								
Arm 5025E	7.52	37.48	0.90	E	0.73	6.58	0.42	A
Arm 5420S	0.80	6.86	0.45	A	3.10	14.85	0.76	B
Arm 5025W	1.72	10.01	0.64	B	2.69	15.39	0.74	C
Arm 5420N	0.28	6.64	0.22	A	0.21	7.17	0.17	A
A1 - 2023 Base								
Arm 5025E	14.56	66.97	0.97	F	0.82	6.98	0.45	A
Arm 5420S	0.91	7.35	0.48	A	4.14	18.98	0.81	C
Arm 5025W	2.06	11.37	0.68	B	3.54	19.34	0.79	C
Arm 5420N	0.31	7.05	0.24	A	0.24	7.69	0.19	A
A1 - 2023 Base + Dev								
Arm 5025E	22.32	97.44	1.01	F	0.97	8.26	0.49	A
Arm 5420S	0.97	7.87	0.50	A	5.11	23.71	0.85	C
Arm 5025W	2.82	14.28	0.74	B	4.87	25.28	0.84	D
Arm 5420N	0.50	8.08	0.34	A	0.61	9.90	0.38	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:15 - 17:45
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 15:44:09

File summary

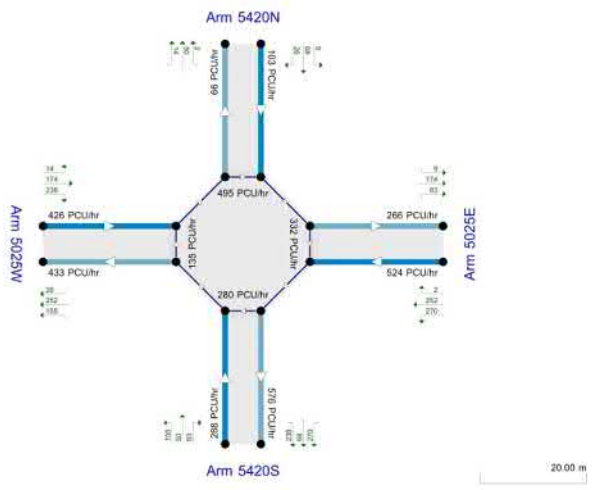
Title	(untitled)
Location	
Site Number	
Date	14/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base, AM	2017 Base	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	FOUR CROSSES	Roundabout	5025E,5420S,5025W,5420N				19.82	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
5025E	5025E	(untitled)	
5420S	5420S	(untitled)	
5025W	5025W	(untitled)	
5420N	5420N	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
5025E	0.00	99999.00		0.00
5420S	0.00	99999.00		0.00
5025W	0.00	99999.00		0.00
5420N	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
5025E	3.75	3.75	0.00	27.30	31.00	23.00	
5420S	3.75	3.75	0.00	47.00	31.00	27.00	
5025W	3.50	3.50	0.00	41.30	31.00	28.00	
5420N	3.50	3.50	0.00	19.00	31.00	22.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
5025E		(calculated)	(calculated)	0.562	1178.707
5420S		(calculated)	(calculated)	0.563	1179.997
5025W		(calculated)	(calculated)	0.543	1094.605
5420N		(calculated)	(calculated)	0.539	1087.210

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
5025E	Percentage			95.00
5420S	None			
5025W	None			
5420N	None			

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
5025E	ONE HOUR	✓	702.10	100.000
5420S	ONE HOUR	✓	385.00	100.000
5025W	ONE HOUR	✓	570.00	100.000
5420N	ONE HOUR	✓	138.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	5025E	528.58	528.58		
07:45-08:00	5420S	289.85	289.85		
07:45-08:00	5025W	429.13	429.13		
07:45-08:00	5420N	103.89	103.89		
08:00-08:15	5025E	631.17	631.17		
08:00-08:15	5420S	346.11	346.11		
08:00-08:15	5025W	512.42	512.42		
08:00-08:15	5420N	124.06	124.06		
08:15-08:30	5025E	773.03	773.03		
08:15-08:30	5420S	423.89	423.89		
08:15-08:30	5025W	627.58	627.58		
08:15-08:30	5420N	151.94	151.94		
08:30-08:45	5025E	773.03	773.03		
08:30-08:45	5420S	423.89	423.89		
08:30-08:45	5025W	627.58	627.58		
08:30-08:45	5420N	151.94	151.94		
08:45-09:00	5025E	631.17	631.17		
08:45-09:00	5420S	346.11	346.11		
08:45-09:00	5025W	512.42	512.42		
08:45-09:00	5420N	124.06	124.06		
09:00-09:15	5025E	528.58	528.58		
09:00-09:15	5420S	289.85	289.85		
09:00-09:15	5025W	429.13	429.13		
09:00-09:15	5420N	103.89	103.89		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		5025E	5420S	5025W	5420N
From	5025E	0.000	362.000	338.000	2.100
	5420S	111.000	0.000	207.000	67.000
	5025W	233.000	318.000	0.000	19.000
	5420N	12.000	91.000	35.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		5025E	5420S	5025W	5420N
From	5025E	0.00	0.52	0.48	0.00
	5420S	0.29	0.00	0.54	0.17
	5025W	0.41	0.56	0.00	0.03
	5420N	0.09	0.66	0.25	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		5025E	5420S	5025W	5420N
From	5025E	1.000	1.000	1.000	1.000
	5420S	1.000	1.000	1.000	1.000
	5025W	1.000	1.000	1.000	1.000
	5420N	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		5025E	5420S	5025W	5420N
From	5025E	0.0	0.0	0.0	0.0
	5420S	0.0	0.0	0.0	0.0
	5025W	0.0	0.0	0.0	0.0
	5420N	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
5025E	0.90	37.48	7.52	29.00	E	644.26	966.39	299.84	18.62	3.33	299.90	18.62
5420S	0.45	6.86	0.80	1.00	A	353.28	529.92	51.54	5.84	0.57	51.54	5.84
5025W	0.64	10.01	1.72	2.00	B	523.04	784.56	102.68	7.85	1.14	102.70	7.85
5420N	0.22	6.64	0.28	−1	A	126.63	189.95	18.38	5.81	0.20	18.38	5.81

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	528.58	132.14	523.58	266.34	332.14	0.00	942.47	623.65	0.561	0.00	1.25	8.497	A
5420S	289.85	72.46	288.28	575.89	279.83	0.00	1022.59	939.61	0.283	0.00	0.39	4.893	A
5025W	429.13	107.28	426.26	433.26	134.85	0.00	1021.37	857.66	0.420	0.00	0.72	6.020	A
5420N	103.89	25.97	103.32	65.94	495.17	0.00	820.10	493.84	0.127	0.00	0.14	5.018	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	631.17	157.79	627.41	319.36	398.30	0.00	907.16	623.67	0.696	1.25	2.19	12.694	B
5420S	346.11	86.53	345.55	690.37	335.34	0.00	991.36	939.60	0.349	0.39	0.53	5.569	A
5025W	512.42	128.10	511.20	519.25	161.64	0.00	1006.82	857.66	0.509	0.72	1.02	7.246	A
5420N	124.06	31.01	123.87	79.05	593.79	0.00	766.90	493.84	0.162	0.14	0.19	5.597	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	773.03	193.26	755.13	390.53	487.03	0.00	859.79	623.67	0.899	2.19	6.66	30.244	D
5420S	423.89	105.97	422.85	837.93	404.24	0.00	952.61	939.60	0.445	0.53	0.79	6.781	A
5025W	627.58	156.90	624.88	629.33	197.76	0.00	987.20	857.66	0.636	1.02	1.70	9.861	A
5420N	151.94	37.99	151.60	96.68	725.96	0.00	695.60	493.84	0.218	0.19	0.28	6.613	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	773.03	193.26	769.58	391.91	488.79	0.00	858.85	623.67	0.900	6.66	7.52	37.482	E
5420S	423.89	105.97	423.85	847.05	411.32	0.00	948.62	939.60	0.447	0.79	0.80	6.859	A
5025W	627.58	156.90	627.48	636.91	198.27	0.00	986.93	857.66	0.636	1.70	1.72	10.008	B
5420N	151.94	37.99	151.93	96.98	728.77	0.00	694.08	493.84	0.219	0.28	0.28	6.639	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	631.17	157.79	651.64	321.45	400.94	0.00	905.74	623.67	0.697	7.52	2.41	15.194	C
5420S	346.11	86.53	347.12	705.37	347.21	0.00	984.69	939.60	0.351	0.80	0.55	5.657	A
5025W	512.42	128.10	515.08	531.89	162.44	0.00	1006.38	857.66	0.509	1.72	1.05	7.368	A
5420N	124.06	31.01	124.39	79.53	597.99	0.00	764.63	493.84	0.162	0.28	0.20	5.627	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	528.58	132.14	532.97	268.73	335.16	0.00	940.86	623.65	0.562	2.41	1.31	8.917	A
5420S	289.85	72.46	290.44	583.56	284.57	0.00	1019.92	939.61	0.284	0.55	0.40	4.938	A
5025W	429.13	107.28	430.41	439.14	135.87	0.00	1020.81	857.66	0.420	1.05	0.73	6.110	A
5420N	103.89	25.97	104.09	66.48	499.80	0.00	817.60	493.84	0.127	0.20	0.15	5.048	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	17.65	1.18	8.497	A	A
5420S	5.72	0.38	4.893	A	A
5025W	10.33	0.69	6.020	A	A
5420N	2.11	0.14	5.018	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	30.56	2.04	12.694	B	B
5420S	7.79	0.52	5.569	A	A
5025W	14.79	0.99	7.246	A	A
5420N	2.82	0.19	5.597	A	A

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	80.61	5.37	30.244	D	C
5420S	11.50	0.77	6.781	A	A
5025W	24.07	1.60	9.861	A	A
5420N	4.05	0.27	6.613	A	A

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	107.42	7.16	37.482	E	D
5420S	11.97	0.80	6.859	A	A
5025W	25.66	1.71	10.008	B	B
5420N	4.17	0.28	6.639	A	A

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	42.88	2.86	15.194	C	B
5420S	8.43	0.56	5.657	A	A
5025W	16.49	1.10	7.368	A	A
5420N	2.99	0.20	5.627	A	A

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	20.72	1.38	8.917	A	A
5420S	6.13	0.41	4.938	A	A
5025W	11.34	0.76	6.110	A	A
5420N	2.24	0.15	5.048	A	A

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	1.25	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420S	0.39	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5025W	0.72	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420N	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:00-08:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	2.19	0.00	0.00	5.00	7.00			N/A	N/A
5420S	0.53	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5025W	1.02	0.00	0.00	1.00	2.00			N/A	N/A
5420N	0.19	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:15-08:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	6.66	0.00	0.00	16.00	26.00			N/A	N/A
5420S	0.79	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5025W	1.70	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420N	0.28	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:30-08:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	7.52	0.00	0.00	14.00	29.00			N/A	N/A
5420S	0.80	0.00	0.00	0.00	1.00			N/A	N/A
5025W	1.72	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420N	0.28	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:45-09:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	2.41	0.00	0.00	5.00	8.00			N/A	N/A
5420S	0.55	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5025W	1.05	0.00	0.00	1.00	2.00			N/A	N/A
5420N	0.20	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (09:00-09:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	1.31	0.00	0.00	1.00	4.00			N/A	N/A
5420S	0.40	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5025W	0.73	0.00	0.00	1.00	1.00			N/A	N/A
5420N	0.15	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base, PM	2017 Base	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	FOUR CROSSES	Roundabout	5025E,5420S,5025W,5420N				12.88	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
5025E	5025E	(untitled)	
5420S	5420S	(untitled)	
5025W	5025W	(untitled)	
5420N	5420N	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
5025E	0.00	99999.00		0.00
5420S	0.00	99999.00		0.00
5025W	0.00	99999.00		0.00
5420N	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
5025E	3.75	3.75	0.00	27.30	31.00	23.00	
5420S	3.75	3.75	0.00	47.00	31.00	27.00	
5025W	3.50	3.50	0.00	41.30	31.00	28.00	
5420N	3.50	3.50	0.00	19.00	31.00	22.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
5025E		(calculated)	(calculated)	0.562	1178.707
5420S		(calculated)	(calculated)	0.563	1179.997
5025W		(calculated)	(calculated)	0.543	1094.605
5420N		(calculated)	(calculated)	0.539	1087.210

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
5025E	Percentage			95.00
5420S	None			
5025W	None			
5420N	None			

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
5025E	ONE HOUR	✓	367.00	100.000
5420S	ONE HOUR	✓	701.00	100.000
5025W	ONE HOUR	✓	588.00	100.000
5420N	ONE HOUR	✓	95.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	5025E	276.30	276.30		
16:15-16:30	5420S	527.75	527.75		
16:15-16:30	5025W	442.68	442.68		
16:15-16:30	5420N	71.52	71.52		
16:30-16:45	5025E	329.93	329.93		
16:30-16:45	5420S	630.18	630.18		
16:30-16:45	5025W	528.60	528.60		
16:30-16:45	5420N	85.40	85.40		
16:45-17:00	5025E	404.07	404.07		
16:45-17:00	5420S	771.82	771.82		
16:45-17:00	5025W	647.40	647.40		
16:45-17:00	5420N	104.60	104.60		
17:00-17:15	5025E	404.07	404.07		
17:00-17:15	5420S	771.82	771.82		
17:00-17:15	5025W	647.40	647.40		
17:00-17:15	5420N	104.60	104.60		
17:15-17:30	5025E	329.93	329.93		
17:15-17:30	5420S	630.18	630.18		
17:15-17:30	5025W	528.60	528.60		
17:15-17:30	5420N	85.40	85.40		
17:30-17:45	5025E	276.30	276.30		
17:30-17:45	5420S	527.75	527.75		
17:30-17:45	5025W	442.68	442.68		
17:30-17:45	5420N	71.52	71.52		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		5025E	5420S	5025W	5420N
From	5025E	0.000	127.000	237.000	3.000
	5420S	242.000	0.000	345.000	114.000
	5025W	366.000	202.000	0.000	20.000
	5420N	10.000	55.000	30.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		5025E	5420S	5025W	5420N
From	5025E	0.00	0.35	0.65	0.01
	5420S	0.35	0.00	0.49	0.16
	5025W	0.62	0.34	0.00	0.03
	5420N	0.11	0.58	0.32	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		5025E	5420S	5025W	5420N
From	5025E	1.000	1.000	1.000	1.000
	5420S	1.000	1.000	1.000	1.000
	5025W	1.000	1.000	1.000	1.000
	5420N	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		5025E	5420S	5025W	5420N
From	5025E	0.0	0.0	0.0	0.0
	5420S	0.0	0.0	0.0	0.0
	5025W	0.0	0.0	0.0	0.0
	5420N	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
5025E	0.42	6.58	0.73	1.00	A	336.77	505.15	48.14	5.72	0.53	48.15	5.72
5420S	0.76	14.85	3.10	9.00	B	643.25	964.87	162.50	10.10	1.81	162.53	10.11
5025W	0.74	15.39	2.69	7.00	C	539.56	809.34	142.93	10.60	1.59	142.95	10.60
5420N	0.17	7.17	0.21	−1	A	87.17	130.76	13.43	6.16	0.15	13.44	6.16

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	276.30	69.07	274.79	461.74	214.52	0.00	1005.26	730.47	0.275	0.00	0.38	4.918	A
5420S	527.75	131.94	523.89	287.15	202.16	0.00	1066.28	825.41	0.495	0.00	0.97	6.592	A
5025W	442.68	110.67	439.23	457.74	268.30	0.00	948.89	863.70	0.467	0.00	0.86	7.019	A
5420N	71.52	17.88	71.11	102.38	605.15	0.00	760.77	483.43	0.094	0.00	0.10	5.216	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	329.93	82.48	329.43	553.69	257.25	0.00	982.45	730.48	0.336	0.38	0.50	5.513	A
5420S	630.18	157.55	628.09	344.32	242.35	0.00	1043.67	825.41	0.604	0.97	1.49	8.617	A
5025W	528.60	132.15	526.76	548.78	321.67	0.00	919.91	863.70	0.575	0.86	1.32	9.113	A
5420N	85.40	21.35	85.26	122.75	725.68	0.00	695.75	483.43	0.123	0.10	0.14	5.895	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	404.07	101.02	403.17	675.10	313.99	0.00	952.16	730.48	0.424	0.50	0.73	6.546	A
5420S	771.82	192.95	765.75	420.55	296.60	0.00	1013.16	825.41	0.762	1.49	3.01	14.207	B
5025W	647.40	161.85	642.25	670.17	392.18	0.00	881.61	863.70	0.734	1.32	2.61	14.725	B
5420N	104.60	26.15	104.33	149.67	884.75	0.00	609.94	483.43	0.171	0.14	0.21	7.117	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	404.07	101.02	404.05	680.09	315.87	0.00	951.16	730.48	0.425	0.73	0.73	6.579	A
5420S	771.82	192.95	771.44	422.66	297.26	0.00	1012.78	825.41	0.762	3.01	3.10	14.854	B
5025W	647.40	161.85	647.06	673.63	395.08	0.00	880.03	863.70	0.736	2.61	2.69	15.394	C
5420N	104.60	26.15	104.59	150.77	891.37	0.00	606.37	483.43	0.173	0.21	0.21	7.173	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	329.93	82.48	330.81	560.96	260.03	0.00	980.96	730.48	0.336	0.73	0.51	5.544	A
5420S	630.18	157.55	636.33	347.46	243.39	0.00	1043.09	825.41	0.604	3.10	1.56	8.978	A
5025W	528.60	132.15	533.81	553.86	325.86	0.00	917.63	863.70	0.576	2.69	1.39	9.503	A
5420N	85.40	21.35	85.66	124.34	735.33	0.00	690.54	483.43	0.124	0.21	0.14	5.955	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	276.30	69.07	276.81	467.31	216.89	0.00	1003.99	730.47	0.275	0.51	0.38	4.955	A
5420S	527.75	131.94	530.02	290.05	203.65	0.00	1065.44	825.41	0.495	1.56	1.00	6.751	A
5025W	442.68	110.67	444.68	462.24	271.43	0.00	947.19	863.70	0.467	1.39	0.89	7.194	A
5420N	71.52	17.88	71.67	103.58	612.53	0.00	756.79	483.43	0.095	0.14	0.11	5.257	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	5.48	0.37	4.918	A	A
5420S	13.84	0.92	6.592	A	A
5025W	12.34	0.82	7.019	A	A
5420N	1.51	0.10	5.216	A	A

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	7.35	0.49	5.513	A	A
5420S	21.33	1.42	8.617	A	A
5025W	18.93	1.26	9.113	A	A
5420N	2.04	0.14	5.895	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	10.60	0.71	6.546	A	A
5420S	41.04	2.74	14.207	B	B
5025W	35.78	2.39	14.725	B	B
5420N	3.00	0.20	7.117	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	10.97	0.73	6.579	A	A
5420S	45.92	3.06	14.854	B	B
5025W	39.92	2.66	15.394	C	B
5420N	3.10	0.21	7.173	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	7.87	0.52	5.544	A	A
5420S	24.85	1.66	8.978	A	A
5025W	22.09	1.47	9.503	A	A
5420N	2.18	0.15	5.955	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	5.86	0.39	4.955	A	A
5420S	15.51	1.03	6.751	A	A
5025W	13.87	0.92	7.194	A	A
5420N	1.61	0.11	5.257	A	A

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	0.38	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420S	0.97	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5025W	0.86	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420N	0.10	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	0.50	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420S	1.49	0.00	0.00	3.00	4.00			N/A	N/A
5025W	1.32	0.00	0.00	2.00	3.00			N/A	N/A
5420N	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	0.73	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420S	3.01	0.00	0.00	2.00	9.00			N/A	N/A
5025W	2.61	0.00	0.00	1.00	7.00			N/A	N/A
5420N	0.21	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	0.73	0.00	0.00	0.00	1.00			N/A	N/A
5420S	3.10	0.00	0.00	0.00	5.00			N/A	N/A
5025W	2.69	0.00	0.00	0.00	4.00			N/A	N/A
5420N	0.21	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	0.51	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420S	1.56	0.00	0.00	3.00	5.00			N/A	N/A
5025W	1.39	0.00	0.00	2.00	4.00			N/A	N/A
5420N	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:30-17:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	0.38	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420S	1.00	0.00	0.00	1.00	3.00			N/A	N/A
5025W	0.89	0.00	0.00	1.00	2.00			N/A	N/A
5420N	0.11	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base, AM	2023 Base	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	FOUR CROSSES	Roundabout	5025E,5420S,5025W,5420N				31.92	D

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
5025E	5025E	(untitled)	
5420S	5420S	(untitled)	
5025W	5025W	(untitled)	
5420N	5420N	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
5025E	0.00	99999.00		0.00
5420S	0.00	99999.00		0.00
5025W	0.00	99999.00		0.00
5420N	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
5025E	3.75	3.75	0.00	27.30	31.00	23.00	
5420S	3.75	3.75	0.00	47.00	31.00	27.00	
5025W	3.50	3.50	0.00	41.30	31.00	28.00	
5420N	3.50	3.50	0.00	19.00	31.00	22.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
5025E		(calculated)	(calculated)	0.562	1178.707
5420S		(calculated)	(calculated)	0.563	1179.997
5025W		(calculated)	(calculated)	0.543	1094.605
5420N		(calculated)	(calculated)	0.539	1087.210

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
5025E	Percentage			95.00
5420S	None			
5025W	None			
5420N	None			

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
5025E	ONE HOUR	✓	743.00	100.000
5420S	ONE HOUR	✓	407.00	100.000
5025W	ONE HOUR	✓	604.00	100.000
5420N	ONE HOUR	✓	146.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	5025E	559.37	559.37		
07:45-08:00	5420S	306.41	306.41		
07:45-08:00	5025W	454.72	454.72		
07:45-08:00	5420N	109.92	109.92		
08:00-08:15	5025E	667.94	667.94		
08:00-08:15	5420S	365.88	365.88		
08:00-08:15	5025W	542.98	542.98		
08:00-08:15	5420N	131.25	131.25		
08:15-08:30	5025E	818.06	818.06		
08:15-08:30	5420S	448.12	448.12		
08:15-08:30	5025W	665.02	665.02		
08:15-08:30	5420N	160.75	160.75		
08:30-08:45	5025E	818.06	818.06		
08:30-08:45	5420S	448.12	448.12		
08:30-08:45	5025W	665.02	665.02		
08:30-08:45	5420N	160.75	160.75		
08:45-09:00	5025E	667.94	667.94		
08:45-09:00	5420S	365.88	365.88		
08:45-09:00	5025W	542.98	542.98		
08:45-09:00	5420N	131.25	131.25		
09:00-09:15	5025E	559.37	559.37		
09:00-09:15	5420S	306.41	306.41		
09:00-09:15	5025W	454.72	454.72		
09:00-09:15	5420N	109.92	109.92		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		5025E	5420S	5025W	5420N
From	5025E	0.000	383.000	358.000	2.000
	5420S	117.000	0.000	219.000	71.000
	5025W	247.000	337.000	0.000	20.000
	5420N	13.000	96.000	37.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		5025E	5420S	5025W	5420N
From	5025E	0.00	0.52	0.48	0.00
	5420S	0.29	0.00	0.54	0.17
	5025W	0.41	0.56	0.00	0.03
	5420N	0.09	0.66	0.25	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		5025E	5420S	5025W	5420N
From	5025E	1.000	1.000	1.000	1.000
	5420S	1.000	1.000	1.000	1.000
	5025W	1.000	1.000	1.000	1.000
	5420N	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		5025E	5420S	5025W	5420N
From	5025E	0.0	0.0	0.0	0.0
	5420S	0.0	0.0	0.0	0.0
	5025W	0.0	0.0	0.0	0.0
	5420N	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
5025E	0.97	66.97	14.56	57.00	F	681.79	1022.68	474.61	27.84	5.27	474.68	27.85
5420S	0.48	7.35	0.91	1.00	A	373.47	560.21	57.55	6.16	0.64	57.56	6.16
5025W	0.68	11.37	2.06	3.00	B	554.24	831.36	119.16	8.60	1.32	119.18	8.60
5420N	0.24	7.05	0.31	~1	A	133.97	200.96	20.38	6.09	0.23	20.38	6.09

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	559.37	139.84	553.52	281.97	351.49	0.00	932.14	624.00	0.600	0.00	1.46	9.370	A
5420S	306.41	76.60	304.69	609.12	295.89	0.00	1013.55	939.50	0.302	0.00	0.43	5.066	A
5025W	454.72	113.68	451.53	458.35	142.23	0.00	1017.36	858.00	0.447	0.00	0.80	6.327	A
5420N	109.92	27.48	109.29	69.59	524.17	0.00	804.45	494.01	0.137	0.00	0.16	5.174	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	667.94	166.99	662.72	338.12	421.51	0.00	894.76	624.01	0.747	1.46	2.77	15.172	C
5420S	365.88	91.47	365.25	729.92	354.31	0.00	980.69	939.50	0.373	0.43	0.59	5.843	A
5025W	542.98	135.75	541.53	549.06	170.50	0.00	1002.01	858.00	0.542	0.80	1.16	7.793	A
5420N	131.25	32.81	131.04	83.43	628.59	0.00	748.12	494.01	0.175	0.16	0.21	5.832	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	818.06	204.51	784.28	413.29	515.18	0.00	844.76	624.01	0.968	2.77	11.21	44.718	E
5420S	448.12	112.03	446.91	878.83	420.64	0.00	943.38	939.50	0.475	0.59	0.89	7.233	A
5025W	665.02	166.25	661.55	659.00	208.54	0.00	981.34	858.00	0.678	1.16	2.03	11.135	B
5420N	160.75	40.19	160.35	101.98	768.12	0.00	672.86	494.01	0.239	0.21	0.31	7.013	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	818.06	204.51	804.67	415.01	517.39	0.00	843.58	624.01	0.970	11.21	14.56	66.974	F
5420S	448.12	112.03	448.06	891.44	430.62	0.00	937.77	939.50	0.478	0.89	0.91	7.351	A
5025W	665.02	166.25	664.87	669.54	209.13	0.00	981.02	858.00	0.678	2.03	2.06	11.371	B
5420N	160.75	40.19	160.74	102.34	771.65	0.00	670.95	494.01	0.240	0.31	0.31	7.055	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	667.94	166.99	713.39	340.69	424.79	0.00	893.01	624.01	0.748	14.56	3.20	24.217	C
5420S	365.88	91.47	367.05	759.17	379.02	0.00	966.79	939.50	0.378	0.91	0.62	6.015	A
5025W	542.98	135.75	546.42	574.60	171.47	0.00	1001.48	858.00	0.542	2.06	1.21	7.969	A
5420N	131.25	32.81	131.64	84.04	633.84	0.00	745.29	494.01	0.176	0.31	0.22	5.869	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	559.37	139.84	565.97	284.68	354.91	0.00	930.32	624.00	0.601	3.20	1.55	10.051	B
5420S	306.41	76.60	307.12	618.74	302.14	0.00	1010.04	939.50	0.303	0.62	0.44	5.126	A
5025W	454.72	113.68	456.27	465.87	143.39	0.00	1016.73	858.00	0.447	1.21	0.82	6.440	A
5420N	109.92	27.48	110.14	70.21	529.45	0.00	801.60	494.01	0.137	0.22	0.16	5.209	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	20.48	1.37	9.370	A	A
5420S	6.25	0.42	5.066	A	A
5025W	11.48	0.77	6.327	A	A
5420N	2.30	0.15	5.174	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	37.92	2.53	15.172	C	B
5420S	8.62	0.57	5.843	A	A
5025W	16.77	1.12	7.793	A	A
5420N	3.10	0.21	5.832	A	A

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	122.04	8.14	44.718	E	D
5420S	12.92	0.86	7.233	A	A
5025W	28.49	1.90	11.135	B	B
5420N	4.54	0.30	7.013	A	A

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	195.53	13.04	66.974	F	E
5420S	13.52	0.90	7.351	A	A
5025W	30.75	2.05	11.371	B	B
5420N	4.69	0.31	7.055	A	A

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	73.86	4.92	24.217	C	C
5420S	9.50	0.63	6.015	A	A
5025W	18.96	1.26	7.969	A	A
5420N	3.31	0.22	5.869	A	A

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	24.78	1.65	10.051	B	B
5420S	6.74	0.45	5.126	A	A
5025W	12.70	0.85	6.440	A	A
5420N	2.45	0.16	5.209	A	A

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	1.46	0.00	0.00	1.00	2.00			N/A	N/A
5420S	0.43	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5025W	0.80	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420N	0.16	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:00-08:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	2.77	0.00	0.00	6.00	9.00			N/A	N/A
5420S	0.59	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5025W	1.16	0.00	0.00	2.00	2.00			N/A	N/A
5420N	0.21	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:15-08:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	11.21	0.00	4.00	28.00	40.00			N/A	N/A
5420S	0.89	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5025W	2.03	0.00	0.00	0.00	3.00			N/A	N/A
5420N	0.31	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:30-08:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	14.56	0.00	3.00	38.00	57.00			N/A	N/A
5420S	0.91	0.00	0.00	0.00	1.00			N/A	N/A
5025W	2.06	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420N	0.31	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:45-09:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	3.20	0.00	0.00	6.00	11.00			N/A	N/A
5420S	0.62	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5025W	1.21	0.00	0.00	2.00	3.00			N/A	N/A
5420N	0.22	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (09:00-09:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	1.55	0.00	0.00	1.00	4.00			N/A	N/A
5420S	0.44	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5025W	0.82	0.00	0.00	1.00	2.00			N/A	N/A
5420N	0.16	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base, PM	2023 Base	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	FOUR CROSSES	Roundabout	5025E,5420S,5025W,5420N				15.97	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
5025E	5025E	(untitled)	
5420S	5420S	(untitled)	
5025W	5025W	(untitled)	
5420N	5420N	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
5025E	0.00	99999.00		0.00
5420S	0.00	99999.00		0.00
5025W	0.00	99999.00		0.00
5420N	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
5025E	3.75	3.75	0.00	27.30	31.00	23.00	
5420S	3.75	3.75	0.00	47.00	31.00	27.00	
5025W	3.50	3.50	0.00	41.30	31.00	28.00	
5420N	3.50	3.50	0.00	19.00	31.00	22.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
5025E		(calculated)	(calculated)	0.562	1178.707
5420S		(calculated)	(calculated)	0.563	1179.997
5025W		(calculated)	(calculated)	0.543	1094.605
5420N		(calculated)	(calculated)	0.539	1087.210

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
5025E	Percentage			95.00
5420S	None			
5025W	None			
5420N	None			

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
5025E	ONE HOUR	✓	387.00	100.000
5420S	ONE HOUR	✓	741.00	100.000
5025W	ONE HOUR	✓	621.00	100.000
5420N	ONE HOUR	✓	101.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	5025E	291.35	291.35		
16:15-16:30	5420S	557.86	557.86		
16:15-16:30	5025W	467.52	467.52		
16:15-16:30	5420N	76.04	76.04		
16:30-16:45	5025E	347.91	347.91		
16:30-16:45	5420S	666.14	666.14		
16:30-16:45	5025W	558.27	558.27		
16:30-16:45	5420N	90.80	90.80		
16:45-17:00	5025E	426.09	426.09		
16:45-17:00	5420S	815.86	815.86		
16:45-17:00	5025W	683.73	683.73		
16:45-17:00	5420N	111.20	111.20		
17:00-17:15	5025E	426.09	426.09		
17:00-17:15	5420S	815.86	815.86		
17:00-17:15	5025W	683.73	683.73		
17:00-17:15	5420N	111.20	111.20		
17:15-17:30	5025E	347.91	347.91		
17:15-17:30	5420S	666.14	666.14		
17:15-17:30	5025W	558.27	558.27		
17:15-17:30	5420N	90.80	90.80		
17:30-17:45	5025E	291.35	291.35		
17:30-17:45	5420S	557.86	557.86		
17:30-17:45	5025W	467.52	467.52		
17:30-17:45	5420N	76.04	76.04		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		5025E	5420S	5025W	5420N
From	5025E	0.000	133.000	251.000	3.000
	5420S	256.000	0.000	364.000	121.000
	5025W	387.000	213.000	0.000	21.000
	5420N	11.000	58.000	32.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		5025E	5420S	5025W	5420N
From	5025E	0.00	0.34	0.65	0.01
	5420S	0.35	0.00	0.49	0.16
	5025W	0.62	0.34	0.00	0.03
	5420N	0.11	0.57	0.32	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		5025E	5420S	5025W	5420N
From	5025E	1.000	1.000	1.000	1.000
	5420S	1.000	1.000	1.000	1.000
	5025W	1.000	1.000	1.000	1.000
	5420N	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		5025E	5420S	5025W	5420N
From	5025E	0.0	0.0	0.0	0.0
	5420S	0.0	0.0	0.0	0.0
	5025W	0.0	0.0	0.0	0.0
	5420N	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
5025E	0.45	6.98	0.82	1.00	A	355.12	532.68	53.11	5.98	0.59	53.12	5.98
5420S	0.81	18.98	4.14	14.00	C	679.95	1019.93	201.72	11.87	2.24	201.75	11.87
5025W	0.79	19.34	3.54	11.00	C	569.84	854.76	175.39	12.31	1.95	175.43	12.31
5420N	0.19	7.69	0.24	~1	A	92.68	139.02	15.06	6.50	0.17	15.06	6.50

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	291.35	72.84	289.72	488.38	226.38	0.00	998.93	731.62	0.292	0.00	0.41	5.065	A
5420S	557.86	139.47	553.49	302.00	214.10	0.00	1059.56	823.72	0.527	0.00	1.09	7.054	A
5025W	467.52	116.88	463.63	483.74	283.85	0.00	940.45	863.92	0.497	0.00	0.97	7.492	A
5420N	76.04	19.01	75.58	108.31	639.17	0.00	742.41	483.43	0.102	0.00	0.11	5.395	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	347.91	86.98	347.34	585.58	271.46	0.00	974.86	731.63	0.357	0.41	0.55	5.732	A
5420S	666.14	166.54	663.51	362.11	256.69	0.00	1035.61	823.72	0.643	1.09	1.75	9.604	A
5025W	558.27	139.57	555.98	579.93	340.27	0.00	909.80	863.92	0.614	0.97	1.54	10.108	B
5420N	90.80	22.70	90.63	129.84	766.40	0.00	673.78	483.43	0.135	0.11	0.15	6.172	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	426.09	106.52	425.04	712.45	330.83	0.00	943.17	731.63	0.452	0.55	0.81	6.934	A
5420S	815.86	203.96	807.06	441.77	314.10	0.00	1003.31	823.72	0.813	1.75	3.95	17.591	C
5025W	683.73	170.93	676.43	707.26	413.91	0.00	869.81	863.92	0.786	1.54	3.37	17.961	C
5420N	111.20	27.80	110.89	157.96	932.38	0.00	584.25	483.43	0.190	0.15	0.23	7.600	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	426.09	106.52	426.07	719.39	333.37	0.00	941.81	731.63	0.452	0.81	0.82	6.979	A
5420S	815.86	203.96	815.11	444.57	314.87	0.00	1002.88	823.72	0.814	3.95	4.14	18.978	C
5025W	683.73	170.93	683.07	711.97	418.01	0.00	867.58	863.92	0.788	3.37	3.54	19.338	C
5420N	111.20	27.80	111.19	159.50	941.57	0.00	579.29	483.43	0.192	0.23	0.24	7.690	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	347.91	86.98	348.94	595.82	275.26	0.00	972.84	731.63	0.358	0.82	0.56	5.779	A
5420S	666.14	166.54	675.25	366.31	257.88	0.00	1034.93	823.72	0.644	4.14	1.86	10.248	B
5025W	558.27	139.57	565.82	586.88	346.26	0.00	906.55	863.92	0.616	3.54	1.65	10.786	B
5420N	90.80	22.70	91.10	132.10	779.97	0.00	666.46	483.43	0.136	0.24	0.16	6.259	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	291.35	72.84	291.94	494.98	229.15	0.00	997.45	731.62	0.292	0.56	0.42	5.106	A
5420S	557.86	139.47	560.77	305.33	215.75	0.00	1058.63	823.72	0.527	1.86	1.13	7.274	A
5025W	467.52	116.88	470.08	488.96	287.57	0.00	938.42	863.92	0.498	1.65	1.01	7.727	A
5420N	76.04	19.01	76.21	109.73	647.92	0.00	737.70	483.43	0.103	0.16	0.12	5.443	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	5.95	0.40	5.065	A	A
5420S	15.60	1.04	7.054	A	A
5025W	13.87	0.92	7.492	A	A
5420N	1.65	0.11	5.395	A	A

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	8.05	0.54	5.732	A	A
5420S	24.92	1.66	9.604	A	A
5025W	21.99	1.47	10.108	B	B
5420N	2.27	0.15	6.172	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	11.81	0.79	6.934	A	A
5420S	52.41	3.49	17.591	C	B
5025W	45.06	3.00	17.961	C	B
5420N	3.40	0.23	7.600	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	12.26	0.82	6.979	A	A
5420S	60.94	4.06	18.978	C	B
5025W	52.07	3.47	19.338	C	B
5420N	3.52	0.23	7.690	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	8.67	0.58	5.779	A	A
5420S	30.13	2.01	10.248	B	B
5025W	26.61	1.77	10.786	B	B
5420N	2.44	0.16	6.259	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	6.38	0.43	5.106	A	A
5420S	17.72	1.18	7.274	A	A
5025W	15.80	1.05	7.727	A	A
5420N	1.77	0.12	5.443	A	A

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	0.41	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420S	1.09	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5025W	0.97	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420N	0.11	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	0.55	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420S	1.75	0.00	0.00	3.00	5.00			N/A	N/A
5025W	1.54	0.00	0.00	3.00	4.00			N/A	N/A
5420N	0.15	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	0.81	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420S	3.95	0.00	0.00	5.00	14.00			N/A	N/A
5025W	3.37	0.00	0.00	4.00	11.00			N/A	N/A
5420N	0.23	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	0.82	0.00	0.00	0.00	1.00			N/A	N/A
5420S	4.14	0.00	0.00	1.00	10.00			N/A	N/A
5025W	3.54	0.00	0.00	1.00	8.00			N/A	N/A
5420N	0.24	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	0.56	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420S	1.86	0.00	0.00	4.00	6.00			N/A	N/A
5025W	1.65	0.00	0.00	3.00	5.00			N/A	N/A
5420N	0.16	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:30-17:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	0.42	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420S	1.13	0.00	0.00	1.00	3.00			N/A	N/A
5025W	1.01	0.00	0.00	1.00	3.00			N/A	N/A
5420N	0.12	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base + Dev, AM	2023 Base + Dev	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	FOUR CROSSES	Roundabout	5025E,5420S,5025W,5420N				42.98	E

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
5025E	5025E	(untitled)	
5420S	5420S	(untitled)	
5025W	5025W	(untitled)	
5420N	5420N	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
5025E	0.00	99999.00		0.00
5420S	0.00	99999.00		0.00
5025W	0.00	99999.00		0.00
5420N	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
5025E	3.75	3.75	0.00	27.30	31.00	23.00	
5420S	3.75	3.75	0.00	47.00	31.00	27.00	
5025W	3.50	3.50	0.00	41.30	31.00	28.00	
5420N	3.50	3.50	0.00	19.00	31.00	22.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
5025E		(calculated)	(calculated)	0.562	1178.707
5420S		(calculated)	(calculated)	0.563	1179.997
5025W		(calculated)	(calculated)	0.543	1094.605
5420N		(calculated)	(calculated)	0.539	1087.210

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
5025E	Percentage			95.00
5420S	None			
5025W	None			
5420N	None			

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
5025E	ONE HOUR	✓	743.10	100.000
5420S	ONE HOUR	✓	407.00	100.000
5025W	ONE HOUR	✓	663.00	100.000
5420N	ONE HOUR	✓	205.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	5025E	559.44	559.44		
07:45-08:00	5420S	306.41	306.41		
07:45-08:00	5025W	499.14	499.14		
07:45-08:00	5420N	154.33	154.33		
08:00-08:15	5025E	668.03	668.03		
08:00-08:15	5420S	365.88	365.88		
08:00-08:15	5025W	596.02	596.02		
08:00-08:15	5420N	184.29	184.29		
08:15-08:30	5025E	818.17	818.17		
08:15-08:30	5420S	448.12	448.12		
08:15-08:30	5025W	729.98	729.98		
08:15-08:30	5420N	225.71	225.71		
08:30-08:45	5025E	818.17	818.17		
08:30-08:45	5420S	448.12	448.12		
08:30-08:45	5025W	729.98	729.98		
08:30-08:45	5420N	225.71	225.71		
08:45-09:00	5025E	668.03	668.03		
08:45-09:00	5420S	365.88	365.88		
08:45-09:00	5025W	596.02	596.02		
08:45-09:00	5420N	184.29	184.29		
09:00-09:15	5025E	559.44	559.44		
09:00-09:15	5420S	306.41	306.41		
09:00-09:15	5025W	499.14	499.14		
09:00-09:15	5420N	154.33	154.33		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		5025E	5420S	5025W	5420N
From	5025E	0.000	383.000	358.000	2.100
	5420S	117.000	0.000	219.000	71.000
	5025W	247.000	337.000	0.000	79.000
	5420N	13.000	96.000	96.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		5025E	5420S	5025W	5420N
From	5025E	0.00	0.52	0.48	0.00
	5420S	0.29	0.00	0.54	0.17
	5025W	0.37	0.51	0.00	0.12
	5420N	0.06	0.47	0.47	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		5025E	5420S	5025W	5420N
From	5025E	1.000	1.000	1.000	1.000
	5420S	1.000	1.000	1.000	1.000
	5025W	1.000	1.000	1.000	1.000
	5420N	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		5025E	5420S	5025W	5420N
From	5025E	0.0	0.0	0.0	0.0
	5420S	0.0	0.0	0.0	0.0
	5025W	0.0	0.0	0.0	0.0
	5420N	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
5025E	1.01	97.44	22.32	71.00	F	681.88	1022.82	653.91	38.36	7.27	654.00	38.36
5420S	0.50	7.87	0.97	1.00	A	373.47	560.21	60.91	6.52	0.68	60.92	6.52
5025W	0.74	14.28	2.82	7.00	B	608.38	912.57	152.96	10.06	1.70	152.99	10.06
5420N	0.34	8.08	0.50	1.00	A	188.11	282.17	31.72	6.74	0.35	31.72	6.75

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	559.44	139.86	553.22	281.84	395.45	0.00	908.68	614.20	0.616	0.00	1.56	9.963	A
5420S	306.41	76.60	304.63	608.75	339.92	0.00	988.79	871.31	0.310	0.00	0.45	5.248	A
5025W	499.14	124.79	495.35	502.27	142.28	0.00	1017.33	875.08	0.491	0.00	0.95	6.848	A
5420N	154.33	38.58	153.39	113.73	523.89	0.00	804.60	536.29	0.192	0.00	0.24	5.520	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	668.03	167.01	661.79	337.97	474.24	0.00	866.61	614.21	0.771	1.56	3.12	17.062	C
5420S	365.88	91.47	365.19	729.20	406.84	0.00	951.14	871.30	0.385	0.45	0.62	6.136	A
5025W	596.02	149.01	594.08	601.47	170.56	0.00	1001.97	875.08	0.595	0.95	1.43	8.782	A
5420N	184.29	46.07	183.94	136.36	628.27	0.00	748.29	536.29	0.246	0.24	0.32	6.374	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	818.17	204.54	769.67	412.70	579.12	0.00	810.63	614.21	1.009	3.12	15.24	57.335	F
5420S	448.12	112.03	446.78	870.45	478.35	0.00	910.92	871.30	0.492	0.62	0.95	7.734	A
5025W	729.98	182.49	724.73	716.58	208.55	0.00	981.34	875.08	0.744	1.43	2.75	13.747	B
5420N	225.71	56.43	225.01	166.47	766.81	0.00	673.56	536.29	0.335	0.32	0.50	8.001	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	818.17	204.54	789.87	414.95	582.26	0.00	808.95	614.21	1.011	15.24	22.32	97.438	F
5420S	448.12	112.03	448.05	883.68	488.45	0.00	905.23	871.30	0.495	0.95	0.97	7.872	A
5025W	729.98	182.49	729.67	727.30	209.19	0.00	980.99	875.08	0.744	2.75	2.82	14.276	B
5420N	225.71	56.43	225.69	167.34	771.53	0.00	671.02	536.29	0.336	0.50	0.50	8.083	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	668.03	167.01	742.06	341.28	478.88	0.00	864.14	614.21	0.773	22.32	3.81	40.876	E
5420S	365.88	91.47	367.14	774.72	446.22	0.00	928.99	871.30	0.394	0.97	0.66	6.423	A
5025W	596.02	149.01	601.29	641.67	171.68	0.00	1001.36	875.08	0.595	2.82	1.50	9.112	A
5420N	184.29	46.07	184.97	137.79	635.19	0.00	744.56	536.29	0.248	0.50	0.33	6.440	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	559.44	139.86	568.04	284.86	399.67	0.00	906.42	614.20	0.617	3.81	1.66	10.895	B
5420S	306.41	76.60	307.22	620.00	347.71	0.00	984.40	871.31	0.311	0.66	0.46	5.321	A
5025W	499.14	124.79	501.25	511.42	143.51	0.00	1016.66	875.08	0.491	1.50	0.98	7.012	A
5420N	154.33	38.58	154.70	114.92	529.84	0.00	801.40	536.29	0.193	0.33	0.24	5.571	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	21.70	1.45	9.963	A	A
5420S	6.47	0.43	5.248	A	A
5025W	13.58	0.91	6.848	A	A
5420N	3.43	0.23	5.520	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	42.12	2.81	17.062	C	B
5420S	9.04	0.60	6.136	A	A
5025W	20.57	1.37	8.782	A	A
5420N	4.74	0.32	6.374	A	A

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	154.64	10.31	57.335	F	E
5420S	13.76	0.92	7.734	A	A
5025W	37.78	2.52	13.747	B	B
5420N	7.22	0.48	8.001	A	A

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	284.08	18.94	97.438	F	F
5420S	14.46	0.96	7.872	A	A
5025W	41.89	2.79	14.276	B	B
5420N	7.51	0.50	8.083	A	A

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	124.41	8.29	40.876	E	D
5420S	10.17	0.68	6.423	A	A
5025W	23.89	1.59	9.112	A	A
5420N	5.12	0.34	6.440	A	A

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	26.96	1.80	10.895	B	B
5420S	7.01	0.47	5.321	A	A
5025W	15.25	1.02	7.012	A	A
5420N	3.69	0.25	5.571	A	A

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	1.56	0.00	0.00	2.00	2.00			N/A	N/A
5420S	0.45	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5025W	0.95	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420N	0.24	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:00-08:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	3.12	0.00	0.00	7.00	11.00			N/A	N/A
5420S	0.62	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5025W	1.43	0.00	0.00	2.00	4.00			N/A	N/A
5420N	0.32	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:15-08:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	15.24	0.00	9.00	35.00	46.00			N/A	N/A
5420S	0.95	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5025W	2.75	0.00	0.00	1.00	7.00			N/A	N/A
5420N	0.50	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:30-08:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	22.32	0.00	13.00	53.00	71.00			N/A	N/A
5420S	0.97	0.00	0.00	0.00	1.00			N/A	N/A
5025W	2.82	0.00	0.00	0.00	4.00			N/A	N/A
5420N	0.50	0.00	0.00	0.00	1.00			N/A	N/A

Queue Variation results: (08:45-09:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	3.81	0.00	0.00	8.00	14.00			N/A	N/A
5420S	0.66	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5025W	1.50	0.00	0.00	3.00	4.00			N/A	N/A
5420N	0.33	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (09:00-09:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	1.66	0.00	0.00	0.00	4.00			N/A	N/A
5420S	0.46	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5025W	0.98	0.00	0.00	1.00	2.00			N/A	N/A
5420N	0.24	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base + Dev, PM	2023 Base + Dev	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	FOUR CROSSES	Roundabout	5025E,5420S,5025W,5420N				19.82	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
5025E	5025E	(untitled)	
5420S	5420S	(untitled)	
5025W	5025W	(untitled)	
5420N	5420N	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
5025E	0.00	99999.00		0.00
5420S	0.00	99999.00		0.00
5025W	0.00	99999.00		0.00
5420N	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
5025E	3.75	3.75	0.00	27.30	31.00	23.00	
5420S	3.75	3.75	0.00	47.00	31.00	27.00	
5025W	3.50	3.50	0.00	41.30	31.00	28.00	
5420N	3.50	3.50	0.00	19.00	31.00	22.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
5025E		(calculated)	(calculated)	0.562	1178.707
5420S		(calculated)	(calculated)	0.563	1179.997
5025W		(calculated)	(calculated)	0.543	1094.605
5420N		(calculated)	(calculated)	0.539	1087.210

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
5025E	Percentage			95.00
5420S	None			
5025W	None			
5420N	None			

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
5025E	ONE HOUR	✓	387.00	100.000
5420S	ONE HOUR	✓	741.00	100.000
5025W	ONE HOUR	✓	663.00	100.000
5420N	ONE HOUR	✓	205.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	5025E	291.35	291.35		
16:15-16:30	5420S	557.86	557.86		
16:15-16:30	5025W	499.14	499.14		
16:15-16:30	5420N	154.33	154.33		
16:30-16:45	5025E	347.91	347.91		
16:30-16:45	5420S	666.14	666.14		
16:30-16:45	5025W	596.02	596.02		
16:30-16:45	5420N	184.29	184.29		
16:45-17:00	5025E	426.09	426.09		
16:45-17:00	5420S	815.86	815.86		
16:45-17:00	5025W	729.98	729.98		
16:45-17:00	5420N	225.71	225.71		
17:00-17:15	5025E	426.09	426.09		
17:00-17:15	5420S	815.86	815.86		
17:00-17:15	5025W	729.98	729.98		
17:00-17:15	5420N	225.71	225.71		
17:15-17:30	5025E	347.91	347.91		
17:15-17:30	5420S	666.14	666.14		
17:15-17:30	5025W	596.02	596.02		
17:15-17:30	5420N	184.29	184.29		
17:30-17:45	5025E	291.35	291.35		
17:30-17:45	5420S	557.86	557.86		
17:30-17:45	5025W	499.14	499.14		
17:30-17:45	5420N	154.33	154.33		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		5025E	5420S	5025W	5420N
From	5025E	0.000	133.000	251.000	3.000
	5420S	256.000	0.000	364.000	121.000
	5025W	337.000	247.000	0.000	79.000
	5420N	13.000	96.000	96.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		5025E	5420S	5025W	5420N
From	5025E	0.00	0.34	0.65	0.01
	5420S	0.35	0.00	0.49	0.16
	5025W	0.51	0.37	0.00	0.12
	5420N	0.06	0.47	0.47	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		5025E	5420S	5025W	5420N
From	5025E	1.000	1.000	1.000	1.000
	5420S	1.000	1.000	1.000	1.000
	5025W	1.000	1.000	1.000	1.000
	5420N	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		5025E	5420S	5025W	5420N
From	5025E	0.0	0.0	0.0	0.0
	5420S	0.0	0.0	0.0	0.0
	5025W	0.0	0.0	0.0	0.0
	5420N	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
5025E	0.49	8.26	0.97	1.00	A	355.12	532.68	60.29	6.79	0.67	60.30	6.79
5420S	0.85	23.71	5.11	18.00	C	679.95	1019.93	232.70	13.69	2.59	232.74	13.69
5025W	0.84	25.28	4.87	17.00	D	608.38	912.57	222.08	14.60	2.47	222.13	14.60
5420N	0.38	9.90	0.61	1.00	A	188.11	282.17	36.86	7.84	0.41	36.87	7.84

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	291.35	72.84	289.59	452.31	327.88	0.00	944.74	683.53	0.308	0.00	0.44	5.481	A
5420S	557.86	139.47	553.25	355.61	261.86	0.00	1032.70	789.33	0.540	0.00	1.15	7.463	A
5025W	499.14	124.79	494.70	531.38	283.72	0.00	940.51	873.62	0.531	0.00	1.11	7.998	A
5420N	154.33	38.58	153.31	151.53	626.89	0.00	749.04	524.99	0.206	0.00	0.26	6.033	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	347.91	86.98	347.22	542.23	393.16	0.00	909.90	683.55	0.382	0.44	0.61	6.390	A
5420S	666.14	166.54	663.11	426.39	313.99	0.00	1003.37	789.33	0.664	1.15	1.91	10.485	B
5025W	596.02	149.01	593.12	637.04	340.06	0.00	909.91	873.62	0.655	1.11	1.83	11.257	B
5420N	184.29	46.07	183.85	181.65	751.54	0.00	681.80	524.99	0.270	0.26	0.37	7.223	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	426.09	106.52	424.72	657.74	478.48	0.00	864.35	683.55	0.493	0.61	0.96	8.162	A
5420S	815.86	203.96	804.35	519.18	384.02	0.00	963.98	789.33	0.846	1.91	4.79	21.158	C
5025W	729.98	182.49	719.26	775.84	412.52	0.00	870.56	873.62	0.839	1.83	4.51	22.343	C
5420N	225.71	56.43	224.77	220.34	911.44	0.00	595.54	524.99	0.379	0.37	0.60	9.687	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	426.09	106.52	426.05	666.05	482.77	0.00	862.06	683.55	0.494	0.96	0.97	8.256	A
5420S	815.86	203.96	814.56	523.52	385.30	0.00	963.26	789.33	0.847	4.79	5.11	23.709	C
5025W	729.98	182.49	728.56	782.13	417.73	0.00	867.73	873.62	0.841	4.51	4.87	25.282	D
5420N	225.71	56.43	225.65	223.13	923.17	0.00	589.22	524.99	0.383	0.60	0.61	9.899	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	347.91	86.98	349.26	554.91	399.80	0.00	906.35	683.55	0.384	0.97	0.63	6.479	A
5420S	666.14	166.54	678.39	433.09	315.96	0.00	1002.26	789.33	0.665	5.11	2.05	11.508	B
5025W	596.02	149.01	607.51	646.50	347.86	0.00	905.68	873.62	0.658	4.87	2.00	12.504	B
5420N	184.29	46.07	185.22	185.87	769.50	0.00	672.11	524.99	0.274	0.61	0.38	7.406	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
5025E	291.35	72.84	292.07	459.14	332.19	0.00	942.44	683.53	0.309	0.63	0.45	5.540	A
5420S	557.86	139.47	561.27	360.07	264.19	0.00	1031.39	789.33	0.541	2.05	1.20	7.711	A
5025W	499.14	124.79	502.49	537.63	287.82	0.00	938.29	873.62	0.532	2.00	1.16	8.324	A
5420N	154.33	38.58	154.81	153.79	636.52	0.00	743.85	524.99	0.207	0.38	0.26	6.118	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	6.42	0.43	5.481	A	A
5420S	16.41	1.09	7.463	A	A
5025W	15.75	1.05	7.998	A	A
5420N	3.74	0.25	6.033	A	A

Generated on 14/06/2018 15:44:35 using Junctions 8 (8.0.6.541)

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	8.94	0.60	6.390	A	A
5420S	27.02	1.80	10.485	B	B
5025W	25.90	1.73	11.257	B	B
5420N	5.35	0.36	7.223	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	13.79	0.92	8.162	A	A
5420S	61.75	4.12	21.158	C	C
5025W	58.25	3.88	22.343	C	C
5420N	8.65	0.58	9.687	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	14.45	0.96	8.256	A	A
5420S	74.72	4.98	23.709	C	C
5025W	70.89	4.73	25.282	D	C
5420N	9.14	0.61	9.899	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	9.76	0.65	6.479	A	A
5420S	33.96	2.26	11.508	B	B
5025W	33.08	2.21	12.504	B	B
5420N	5.92	0.39	7.406	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
5025E	6.94	0.46	5.540	A	A
5420S	18.84	1.26	7.711	A	A
5025W	18.22	1.21	8.324	A	A
5420N	4.06	0.27	6.118	A	A

Generated on 14/06/2018 15:44:35 using Junctions 8 (8.0.6.541)

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	0.44	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420S	1.15	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5025W	1.11	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420N	0.26	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	0.61	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420S	1.91	0.00	0.00	4.00	6.00			N/A	N/A
5025W	1.83	0.00	0.00	4.00	5.00			N/A	N/A
5420N	0.37	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	0.96	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420S	4.79	0.00	0.00	9.00	18.00			N/A	N/A
5025W	4.51	0.00	0.00	8.00	17.00			N/A	N/A
5420N	0.60	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	0.97	0.00	0.00	0.00	1.00			N/A	N/A
5420S	5.11	0.00	0.00	4.00	16.00			N/A	N/A
5025W	4.87	0.00	0.00	4.00	15.00			N/A	N/A
5420N	0.61	0.00	0.00	0.00	1.00			N/A	N/A

Generated on 14/06/2018 15:44:35 using Junctions 8 (8.0.6.541)

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	0.63	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420S	2.05	0.00	0.00	4.00	7.00			N/A	N/A
5025W	2.00	0.00	0.00	4.00	7.00			N/A	N/A
5420N	0.38	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:30-17:45)

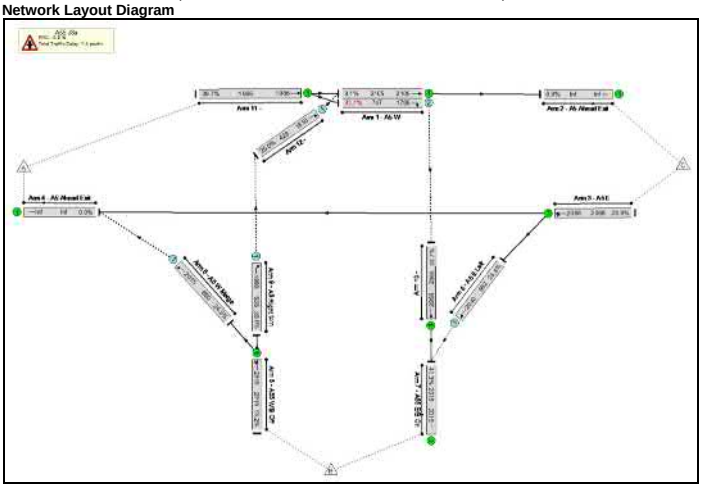
Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
5025E	0.45	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
5420S	1.20	0.00	0.00	1.00	3.00			N/A	N/A
5025W	1.16	0.00	0.00	1.00	3.00			N/A	N/A
5420N	0.26	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Basic Results Summary
Basic Results Summary

User and Project Details

Project:	**North Wales Connection**
Title:	**A55 J8a Model**
Location:	
Client:	National Grid
Date Started:	19/10/2017
Checked By:	Alistair Johnson
Additional detail:	
File name:	A55 J8a.lsg3x
Author:	
Company:	AECOM
Address:	Liverpool L2 2ET

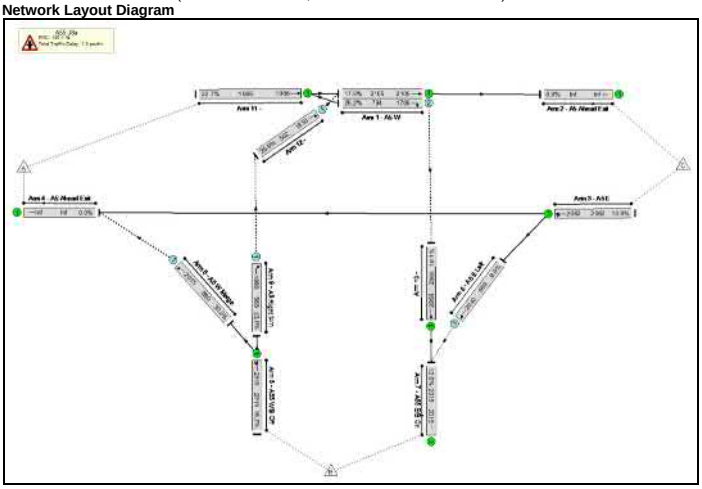
Scenario 1: '2017 AM Base' (FG1: '2017 AM Base', Plan 1: 'Network Control Plan 1')
Network Layout Diagram



Basic Results Summary
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A55 J8a Model	-	-	-		-	-	-	-	-	-	**93.1%**	**1205**	**0**	**0**	**7.4**	-	-
A55 J8a	-	-	-		-	-	-	-	-	-	**93.1%**	**1205**	**0**	**0**	**7.4**	-	-
1/1	A5 W Ahead	U	-		-	-	-	191	2105	2105	9.1%	-	-	-	0.0	0.9	0.0
1/2	A5 W Right	O	-		-	-	-	696	1786	747	93.1%	696	0	0	5.6	28.8	5.6
3/1	A5 E Ahead Left	U	-		-	-	-	430	2058	2058	20.9%	-	-	-	0.1	1.1	0.1
5/1	A5 E Left Ahead	O	-		-	-	-	137	2040	562	24.4%	137	0	0	0.2	4.2	0.2
6/1	A5 W Merge Left	O	-		-	-	-	158	2015	650	24.3%	158	0	0	0.2	3.7	0.2
7/1	A55 E/B On	U	-		-	-	-	833	2015	2015	41.3%	-	-	-	0.4	1.5	0.4
8/1	A55 W/B Off Ahead Ahead2	U	-		-	-	-	265	2015	2015	13.2%	-	-	-	0.1	1.0	0.1
9/1	A5 Right turn Right	O	-		-	-	-	107	1980	535	20.0%	107	0	0	0.1	4.2	0.1
10/1	Ahead	U	-		-	-	-	696	2065	2065	33.7%	-	-	-	0.3	1.3	0.3
11/1	Ahead	U	-		-	-	-	780	1965	1965	39.7%	-	-	-	0.3	1.5	0.3
12/1	Ahead	O	-		-	-	-	107	1816	428	25.0%	107	0	0	0.2	5.6	0.2
C1	PRC for Signalled Lanes (%): PRC Over All Lanes (%):				0.0 -3.5			Total Delay for Signalled Lanes (pcuHr): Total Delay Over All Lanes(pcuHr):				0.00 7.37	Cycle Time (s): 3600				

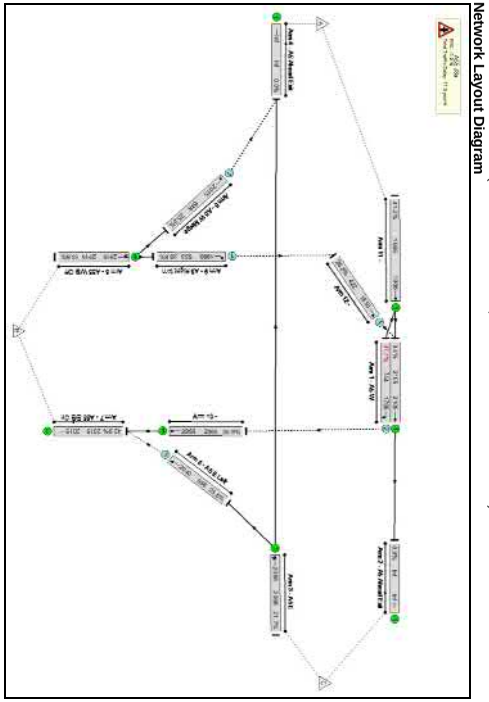
Basic Results Summary
Scenario 2: '2017 PM Base' (FG2: '2017 PM Base', Plan 1: 'Network Control Plan 1')
Network Layout Diagram



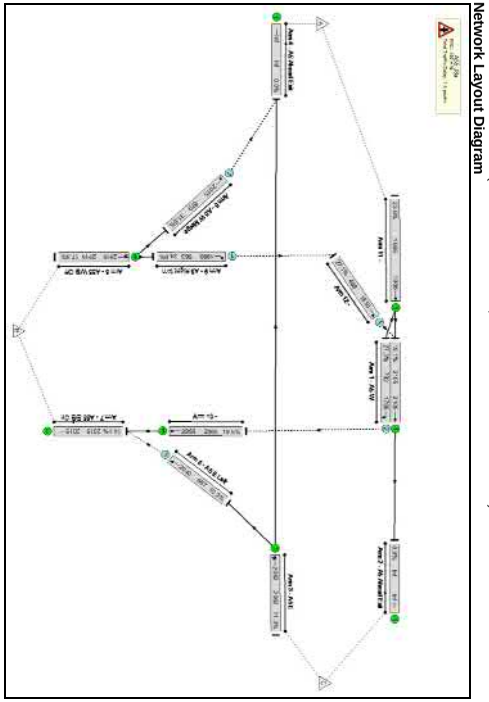
Basic Results Summary
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A55 J8a Model	-	-	-		-	-	-	-	-	-	**30.3%**	**740**	**0**	**0**	**1.3**	-	-
A55 J8a	-	-	-		-	-	-	-	-	-	**30.3%**	**740**	**0**	**0**	**1.3**	-	-
1/1	A5 W Ahead	U	-		-	-	-	368	2105	2105	17.5%	-	-	-	0.1	1.0	0.1
1/2	A5 W Right	O	-		-	-	-	208	1786	794	26.2%	208	0	0	0.2	3.1	0.2
3/1	A5 E Ahead Left	U	-		-	-	-	225	2062	2062	10.9%	-	-	-	0.1	1.0	0.1
5/1	A5 E Left Ahead	O	-		-	-	-	66	2040	669	9.9%	66	0	0	0.1	3.0	0.1
6/1	A5 W Merge Left	O	-		-	-	-	206	2015	680	30.3%	206	0	0	0.2	3.8	0.2
7/1	A55 E/B On	U	-		-	-	-	274	2015	2015	13.6%	-	-	-	0.1	1.0	0.1
8/1	A55 W/B Off Ahead Ahead2	U	-		-	-	-	336	2015	2015	16.7%	-	-	-	0.1	1.1	0.1
9/1	A5 Right turn Right	O	-		-	-	-	130	1980	565	23.0%	130	0	0	0.1	4.1	0.1
10/1	Ahead	U	-		-	-	-	208	2065	2065	10.1%	-	-	-	0.1	1.0	0.1
11/1	Ahead	U	-		-	-	-	446	1965	1965	22.7%	-	-	-	0.1	1.2	0.1
12/1	Ahead	O	-		-	-	-	130	1816	502	25.9%	130	0	0	0.2	4.8	0.2
C1	PRC for Signalled Lanes (%): PRC Over All Lanes (%):				0.0 197.1			Total Delay for Signalled Lanes (pcuHr): Total Delay Over All Lanes(pcuHr):				0.00 1.32	Cycle Time (s): 3600				

Basic Results Summary
Scenario 3: '2023 AM Base' (FG3: '2023 AM Base ', Plan 1: 'Network Control Plan 1')
Network Layout Diagram



Basic Results Summary
Scenario 4: '2023 PM Base' (FG4: '2023 PM Base ', Plan 1: 'Network Control Plan 1')
Network Layout Diagram



Basic Results Summary
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A55 J8a Model	-	-	-		-	-	-	-	-	-	**31.5%**	**769**	**0**	**0**	**1.4**	-	-
A55 J8a	-	-	-		-	-	-	-	-	-	**31.5%**	**769**	**0**	**0**	**1.4**	-	-
1/1	A5 W Ahead	U	-		-	-	-	382	2105	2105	18.1%	-	-	-	0.1	1.0	0.1
1/2	A5 W Right	O	-		-	-	-	216	1786	792	27.3%	216	0	0	0.2	3.1	0.2
3/1	A5 E Ahead Left	U	-		-	-	-	234	2062	2062	11.3%	-	-	-	0.1	1.0	0.1
5/1	A5 E Left Ahead	O	-		-	-	-	69	2040	667	10.3%	69	0	0	0.1	3.0	0.1
6/1	A5 W Merge Left	O	-		-	-	-	214	2015	679	31.5%	214	0	0	0.2	3.9	0.2
7/1	A55 E/B On	U	-		-	-	-	285	2015	2015	14.1%	-	-	-	0.1	1.0	0.1
8/1	A55 W/B Off Ahead Ahead2	U	-		-	-	-	349	2015	2015	17.3%	-	-	-	0.1	1.1	0.1
9/1	A5 Right turn Right	O	-		-	-	-	135	1980	563	24.0%	135	0	0	0.2	4.2	0.2
10/1	Ahead	U	-		-	-	-	216	2065	2065	10.5%	-	-	-	0.1	1.0	0.1
11/1	Ahead	U	-		-	-	-	463	1965	1965	23.6%	-	-	-	0.2	1.2	0.2
12/1	Ahead	O	-		-	-	-	135	1816	498	27.1%	135	0	0	0.2	5.0	0.2

C1 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 0.00 Cycle Time (s): 3600
PRC Over All Lanes (%): 185.4 Total Delay Over All Lanes(pcuHr): 1.39

Basic Results Summary
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A55 J8a Model	-	-	-		-	-	-	-	-	-	**97.1%**	**1250**	**0**	**0**	**11.0**	-	-
A55 J8a	-	-	-		-	-	-	-	-	-	**97.1%**	**1250**	**0**	**0**	**11.0**	-	-
1/1	A5 W Ahead	U	-		-	-	-	198	2105	2105	9.4%	-	-	-	0.1	0.9	0.1
1/2	A5 W Right	O	-		-	-	-	722	1786	744	97.1%	722	0	0	9.1	45.3	9.1
3/1	A5 E Ahead Left	U	-		-	-	-	446	2058	2058	21.7%	-	-	-	0.1	1.1	0.1
5/1	A5 E Left Ahead	O	-		-	-	-	142	2040	556	25.5%	142	0	0	0.2	4.3	0.2
6/1	A5 W Merge Left	O	-		-	-	-	164	2015	648	25.3%	164	0	0	0.2	3.7	0.2
7/1	A55 E/B On	U	-		-	-	-	864	2015	2015	42.9%	-	-	-	0.4	1.6	0.4
8/1	A55 W/B Off Ahead Ahead2	U	-		-	-	-	275	2015	2015	13.6%	-	-	-	0.1	1.0	0.1
9/1	A5 Right turn Right	O	-		-	-	-	111	1980	533	20.8%	111	0	0	0.1	4.3	0.1
10/1	Ahead	U	-		-	-	-	722	2065	2065	35.0%	-	-	-	0.3	1.3	0.3
11/1	Ahead	U	-		-	-	-	809	1965	1965	41.2%	-	-	-	0.3	1.6	0.3
12/1	Ahead	O	-		-	-	-	111	1816	422	26.3%	111	0	0	0.2	5.8	0.2

C1 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 0.00 Cycle Time (s): 3600
PRC Over All Lanes (%): -7.9 Total Delay Over All Lanes(pcuHr): 11.00

Basic Results Summary
Scenario 5: '2023 AM Base + Development' (FG6: '2023 AM Base + Development', Plan 1: 'Network Control Plan 1')
Network Layout Diagram

Basic Results Summary
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/H#)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A55 J8a Model	-	-	-		-	-	-	-	-	-	**108.8%**	**1359**	**0**	**0**	**203.8**	-	-
A55 J8a	-	-	-		-	-	-	-	-	-	**108.8%**	**1359**	**0**	**0**	**203.8**	-	-
1/1	A5 W Ahead	U	-		-	-	-	198	2105	2105	9.4%	-	-	-	0.1	0.9	0.1
1/2	A5 W Right	O	-		-	-	-	809	1786	744	108.8%	744	0	0	201.6	897.3	2465.0
3/1	A5 E Ahead Left	U	-		-	-	-	446	2058	2058	21.7%	-	-	-	0.1	1.1	0.1
5/1	A5 E Left Ahead	O	-		-	-	-	142	2040	551	25.8%	142	0	0	0.2	4.4	0.2
6/1	A5 W Merge Left	O	-		-	-	-	251	2015	648	38.7%	251	0	0	0.3	4.5	0.3
7/1	A55 E/B On	U	-		-	-	-	951	2015	2015	43.9%	-	-	-	0.4	1.6	0.4
8/1	A55 W/B Off Ahead Ahead2	U	-		-	-	-	362	2015	2015	18.0%	-	-	-	0.1	1.1	0.1
9/1	A5 Right turn Right	O	-		-	-	-	111	1980	533	20.8%	111	0	0	0.1	4.3	0.1
10/1	Ahead	U	-		-	-	-	809	2065	2065	36.0%	-	-	-	0.3	1.4	0.3
11/1	Ahead	U	-		-	-	-	896	1965	1965	45.6%	-	-	-	0.4	1.7	0.4
12/1	Ahead	O	-		-	-	-	111	1816	403	27.6%	111	0	0	0.2	6.2	0.2
C1	PRC for Signalled Lanes (%): PRC Over All Lanes (%):						0.0 -20.9	Total Delay for Signalled Lanes (pcuHr): Total Delay Over All Lanes(pcuHr):				0.00 203.85	Cycle Time (s): 3600				

Basic Results Summary
Scenario 6: '2023 PM Base + Development' (FG7: '2023 PM Base + Development', Plan 1: 'Network Control Plan 1')
Network Layout Diagram

Basic Results Summary
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/H#)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A55 J8a Model	-	-	-		-	-	-	-	-	-	**44.4%**	**943**	**0**	**0**	**1.8**	-	-
A55 J8a	-	-	-		-	-	-	-	-	-	**44.4%**	**943**	**0**	**0**	**1.8**	-	-
1/1	A5 W Ahead	U	-		-	-	-	382	2105	2105	18.1%	-	-	-	0.1	1.0	0.1
1/2	A5 W Right	O	-		-	-	-	303	1786	792	38.2%	303	0	0	0.3	3.7	0.3
3/1	A5 E Ahead Left	U	-		-	-	-	234	2062	2062	11.3%	-	-	-	0.1	1.0	0.1
5/1	A5 E Left Ahead	O	-		-	-	-	69	2040	648	10.6%	69	0	0	0.1	3.1	0.1
6/1	A5 W Merge Left	O	-		-	-	-	301	2015	679	44.4%	301	0	0	0.4	4.8	0.4
7/1	A55 E/B On	U	-		-	-	-	372	2015	2015	18.5%	-	-	-	0.1	1.1	0.1
8/1	A55 W/B Off Ahead Ahead2	U	-		-	-	-	436	2015	2015	21.6%	-	-	-	0.1	1.1	0.1
9/1	A5 Right turn Right	O	-		-	-	-	135	1980	563	24.0%	135	0	0	0.2	4.2	0.2
10/1	Ahead	U	-		-	-	-	303	2065	2065	14.7%	-	-	-	0.1	1.0	0.1
11/1	Ahead	U	-		-	-	-	550	1965	1965	28.0%	-	-	-	0.2	1.3	0.2
12/1	Ahead	O	-		-	-	-	135	1816	479	28.2%	135	0	0	0.2	5.2	0.2
C1	PRC for Signalled Lanes (%): PRC Over All Lanes (%):						0.0 102.9	Total Delay for Signalled Lanes (pcuHr): Total Delay Over All Lanes(pcuHr):				0.00 1.83	Cycle Time (s): 3600				

Basic Results Summary
Scenario 7: '2023 AM Base + Seasonality' (FG8: '2023 AM Base + Seasonality', Plan 1: 'Network Control Plan 1')
Network Layout Diagram

Basic Results Summary
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/H#)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A55 J8a Model	-	-	-		-	-	-	-	-	-	**92.7%**	**1200**	**0**	**0**	**7.1**	-	-
A55 J8a	-	-	-		-	-	-	-	-	-	**92.7%**	**1200**	**0**	**0**	**7.1**	-	-
1/1	A5 W Ahead	U	-		-	-	-	191	2105	2105	9.1%	-	-	-	0.0	0.9	0.0
1/2	A5 W Right	O	-		-	-	-	693	1786	748	92.7%	693	0	0	5.3	27.5	5.3
3/1	A5 E Ahead Left	U	-		-	-	-	428	2058	2058	20.8%	-	-	-	0.1	1.1	0.1
5/1	A5 E Left Ahead	O	-		-	-	-	136	2040	563	24.2%	136	0	0	0.2	4.2	0.2
6/1	A5 W Merge Left	O	-		-	-	-	157	2015	651	24.1%	157	0	0	0.2	3.6	0.2
7/1	A55 E/B On	U	-		-	-	-	829	2015	2015	41.1%	-	-	-	0.3	1.5	0.3
8/1	A55 W/B Off Ahead Ahead2	U	-		-	-	-	264	2015	2015	13.1%	-	-	-	0.1	1.0	0.1
9/1	A5 Right turn Right	O	-		-	-	-	107	1980	536	20.0%	107	0	0	0.1	4.2	0.1
10/1	Ahead	U	-		-	-	-	693	2065	2065	33.6%	-	-	-	0.3	1.3	0.3
11/1	Ahead	U	-		-	-	-	777	1965	1965	39.5%	-	-	-	0.3	1.5	0.3
12/1	Ahead	O	-		-	-	-	107	1816	429	25.0%	107	0	0	0.2	5.6	0.2
			C1		PRC for Signalled Lanes (%): PRC Over All Lanes (%):		0.0 -3.0		Total Delay for Signalled Lanes (pcuHr): Total Delay Over All Lanes(pcuHr):			0.00 7.10		Cycle Time (s): 3600			

Basic Results Summary
Scenario 8: '2023 PM Base + Seasonality' (FG9: '2023 PM Base + Seasonality', Plan 1: 'Network Control Plan 1')
Network Layout Diagram

Basic Results Summary
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/H#)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A55 J8a Model	-	-	-		-	-	-	-	-	-	**48.3%**	**1146**	**0**	**0**	**2.6**	-	-
A55 J8a	-	-	-		-	-	-	-	-	-	**48.3%**	**1146**	**0**	**0**	**2.6**	-	-
1/1	A5 W Ahead	U	-		-	-	-	569	2105	2105	27.0%	-	-	-	0.2	1.2	0.2
1/2	A5 W Right	O	-		-	-	-	322	1786	764	42.2%	322	0	0	0.4	4.1	0.4
3/1	A5 E Ahead Left	U	-		-	-	-	349	2062	2062	16.9%	-	-	-	0.1	1.1	0.1
5/1	A5 E Left Ahead	O	-		-	-	-	103	2040	644	16.0%	103	0	0	0.1	3.3	0.1
6/1	A5 W Merge Left	O	-		-	-	-	319	2015	661	48.3%	319	0	0	0.5	5.3	0.5
7/1	A55 E/B On	U	-		-	-	-	425	2015	2015	21.1%	-	-	-	0.1	1.1	0.1
8/1	A55 W/B Off Ahead Ahead2	U	-		-	-	-	520	2015	2015	25.8%	-	-	-	0.2	1.2	0.2
9/1	A5 Right turn Right	O	-		-	-	-	201	1980	546	36.8%	201	0	0	0.3	5.2	0.3
10/1	Ahead	U	-		-	-	-	322	2065	2065	15.6%	-	-	-	0.1	1.0	0.1
11/1	Ahead	U	-		-	-	-	690	1965	1965	35.1%	-	-	-	0.3	1.4	0.3
12/1	Ahead	O	-		-	-	-	201	1816	448	44.9%	201	0	0	0.4	7.3	0.4
			C1		PRC for Signalled Lanes (%): PRC Over All Lanes (%):		0.0 86.4		Total Delay for Signalled Lanes (pcuHr): Total Delay Over All Lanes(pcuHr):			0.00 2.58		Cycle Time (s): 3600			

Basic Results Summary
Scenario 9: '2023 AM Base + Seasonality + Development ' (FG10: '2023 AM Base + Development + Seasonality', Plan 1: 'Network Control Plan 1')

Network Layout Diagram

Basic Results Summary
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/HR)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A55 J8a Model	-	-	-		-	-	-	-	-	-	**104.3%**	**1342**	**0**	**0**	**106.9**	-	-
A55 J8a	-	-	-		-	-	-	-	-	-	**104.3%**	**1342**	**0**	**0**	**106.9**	-	-
1/1	A5 W Ahead	U	-		-	-	-	191	2105	2105	9.1%	-	-	-	0.0	0.9	0.0
1/2	A5 W Right	O	-		-	-	-	780	1786	748	104.3%	748	0	0	104.8	483.6	2364.2
3/1	A5 E Ahead Left	U	-		-	-	-	428	2058	2058	20.8%	-	-	-	0.1	1.1	0.1
5/1	A5 E Left Ahead	O	-		-	-	-	136	2040	550	24.7%	136	0	0	0.2	4.3	0.2
6/1	A5 W Merge Left	O	-		-	-	-	244	2015	651	37.5%	244	0	0	0.3	4.4	0.3
7/1	A55 E/B On	U	-		-	-	-	916	2015	2015	43.9%	-	-	-	0.4	1.6	0.4
8/1	A55 W/B Off Ahead Ahead2	U	-		-	-	-	351	2015	2015	17.4%	-	-	-	0.1	1.1	0.1
9/1	A5 Right turn Right	O	-		-	-	-	107	1980	536	20.0%	107	0	0	0.1	4.2	0.1
10/1	Ahead	U	-		-	-	-	780	2065	2065	36.2%	-	-	-	0.3	1.4	0.3
11/1	Ahead	U	-		-	-	-	864	1965	1965	44.0%	-	-	-	0.4	1.6	0.4
12/1	Ahead	O	-		-	-	-	107	1816	410	26.1%	107	0	0	0.2	5.9	0.2
			C1		PRC for Signalled Lanes (%): PRC Over All Lanes (%):		0.0 -15.9		Total Delay for Signalled Lanes (pcuHr): Total Delay Over All Lanes(pcuHr):			0.00 106.91		Cycle Time (s): 3600			

Basic Results Summary
Scenario 10: '2023 PM Base + Seasonality + Development' (FG11: '2023 PM Base + Development + Seasonality', Plan 1: 'Network Control Plan 1')

Network Layout Diagram

Basic Results Summary
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/HR)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A55 J8a Model	-	-	-		-	-	-	-	-	-	**61.4%**	**1320**	**0**	**0**	**3.3**	-	-
A55 J8a	-	-	-		-	-	-	-	-	-	**61.4%**	**1320**	**0**	**0**	**3.3**	-	-
1/1	A5 W Ahead	U	-		-	-	-	569	2105	2105	27.0%	-	-	-	0.2	1.2	0.2
1/2	A5 W Right	O	-		-	-	-	409	1786	764	53.5%	409	0	0	0.6	5.1	0.6
3/1	A5 E Ahead Left	U	-		-	-	-	349	2062	2062	16.9%	-	-	-	0.1	1.1	0.1
5/1	A5 E Left Ahead	O	-		-	-	-	103	2040	625	16.5%	103	0	0	0.1	3.4	0.1
6/1	A5 W Merge Left	O	-		-	-	-	406	2015	661	61.4%	406	0	0	0.8	7.0	0.8
7/1	A55 E/B On	U	-		-	-	-	512	2015	2015	25.4%	-	-	-	0.2	1.2	0.2
8/1	A55 W/B Off Ahead Ahead2	U	-		-	-	-	607	2015	2015	30.1%	-	-	-	0.2	1.3	0.2
9/1	A5 Right turn Right	O	-		-	-	-	201	1980	546	36.8%	201	0	0	0.3	5.2	0.3
10/1	Ahead	U	-		-	-	-	409	2065	2065	19.8%	-	-	-	0.1	1.1	0.1
11/1	Ahead	U	-		-	-	-	777	1965	1965	39.5%	-	-	-	0.3	1.5	0.3
12/1	Ahead	O	-		-	-	-	201	1816	429	46.9%	201	0	0	0.4	7.9	0.4
			C1		PRC for Signalled Lanes (%): PRC Over All Lanes (%):		0.0 46.5		Total Delay for Signalled Lanes (pcuHr): Total Delay Over All Lanes(pcuHr):			0.00 3.32		Cycle Time (s): 3600			

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A55J9_EB_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A55 J9\2018 DF
Report generation date: 14/06/2018 16:09:52

» (Default Analysis Set) - 2017 Base, AM
» (Default Analysis Set) - 2017 Base, PM
» (Default Analysis Set) - 2023 Base, AM
» (Default Analysis Set) - 2023 Base, PM
» (Default Analysis Set) - 2023 Base + Dev, AM
» (Default Analysis Set) - 2023 Base + Dev, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2017 Base								
Arm 487N	2.89	27.56	0.76	D	1.76	16.26	0.64	C
Arm TAFN	3.05	24.26	0.76	C	21.34	111.30	1.02	F
Arm 487S	2.94	11.51	0.75	B	2.23	9.78	0.69	A
Arm 55OFF	7.91	26.44	0.90	D	1.22	6.05	0.55	A
A1 - 2023 Base								
Arm 487N	4.70	42.70	0.85	E	2.63	22.99	0.73	C
Arm TAFN	5.01	37.97	0.85	E	58.44	269.03	1.16	F
Arm 487S	4.36	15.94	0.82	C	2.97	12.04	0.75	B
Arm 55OFF	21.40	63.43	0.99	F	1.86	7.87	0.65	A
A1 - 2023 Base + Dev								
Arm 487N	4.66	42.36	0.84	E	2.36	20.92	0.71	C
Arm TAFN	5.03	38.09	0.85	E	48.30	225.20	1.13	F
Arm 487S	14.64	46.68	0.96	E	3.38	13.35	0.78	B
Arm 55OFF	20.29	60.41	0.99	F	1.66	7.31	0.63	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:15 - 17:45
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 16:09:44

File summary

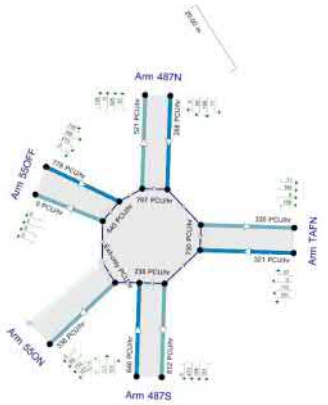
Title	(untitled)
Location	
Site Number	
Date	14/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base, AM	2017 Base	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	J9 A55 EB	Roundabout	487N,TAFN,487S,55ON,55OFF				21.48	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
487N	487N	(untitled)	
TAFN	TAFN	(untitled)	
487S	487S	(untitled)	
55ON	55ON	(untitled)	
55OFF	55OFF	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
487N	0.00	99999.00		0.00
TAFN	0.00	99999.00		0.00
487S	0.00	99999.00		0.00
55ON	0.00	99999.00		0.00
55OFF	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
487N	3.73	5.44	10.30	24.00	63.00	35.00	
TAFN	3.40	5.20	29.00	38.00	63.00	34.00	
487S	7.60	9.28	4.80	25.00	63.00	36.00	
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
55OFF	7.20	9.80	26.00	19.00	63.00	80.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
487N		(calculated)	(calculated)	0.497	1455.047
TAFN		(calculated)	(calculated)	0.509	1499.011
487S		(calculated)	(calculated)	0.675	2514.839
55ON		(calculated)	(calculated)	Exit-only	Exit-only
55OFF		(calculated)	(calculated)	0.595	2289.212

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
487N	Percentage			60.00
TAFN	Percentage			65.00
487S	Percentage			55.00
55ON	Percentage			70.00
55OFF	Percentage			70.00

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
487N	ONE HOUR	✓	359.40	100.000
TAFN	ONE HOUR	✓	430.00	100.000
487S	ONE HOUR	✓	855.00	100.000
55ON	Exit-only	✓	Exit-only	Exit-only
55OFF	ONE HOUR	✓	1040.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	487N	270.58	270.58		
07:45-08:00	TAFN	323.73	323.73		
07:45-08:00	487S	643.69	643.69		
07:45-08:00	55ON	Exit-only	0.00		
07:45-08:00	55OFF	782.97	782.97		
08:00-08:15	487N	323.09	323.09		
08:00-08:15	TAFN	386.56	386.56		
08:00-08:15	487S	768.63	768.63		
08:00-08:15	55ON	Exit-only	0.00		
08:00-08:15	55OFF	934.94	934.94		
08:15-08:30	487N	395.71	395.71		
08:15-08:30	TAFN	473.44	473.44		
08:15-08:30	487S	941.37	941.37		
08:15-08:30	55ON	Exit-only	0.00		
08:15-08:30	55OFF	1145.06	1145.06		
08:30-08:45	487N	395.71	395.71		
08:30-08:45	TAFN	473.44	473.44		
08:30-08:45	487S	941.37	941.37		
08:30-08:45	55ON	Exit-only	0.00		
08:30-08:45	55OFF	1145.06	1145.06		
08:45-09:00	487N	323.09	323.09		
08:45-09:00	TAFN	386.56	386.56		
08:45-09:00	487S	768.63	768.63		
08:45-09:00	55ON	Exit-only	0.00		
08:45-09:00	55OFF	934.94	934.94		
09:00-09:15	487N	270.58	270.58		
09:00-09:15	TAFN	323.73	323.73		
09:00-09:15	487S	643.69	643.69		
09:00-09:15	55ON	Exit-only	0.00		
09:00-09:15	55OFF	782.97	782.97		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To				
		487N	TAFN	487S	55ON	55OFF
From	487N	0.000	15.400	252.000	92.000	0.000
	TAFN	77.000	0.000	203.000	150.000	0.000
	487S	434.000	211.000	0.000	210.000	0.000
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	185.000	222.000	633.000	0.000	0.000

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To				
		487N	TAFN	487S	55ON	55OFF
From	487N	0.00	0.04	0.70	0.26	0.00
	TAFN	0.18	0.00	0.47	0.35	0.00
	487S	0.51	0.25	0.00	0.25	0.00
	55ON	0.20	0.20	0.20	0.20	0.20
	55OFF	0.18	0.21	0.61	0.00	0.00

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To				
		487N	TAFN	487S	55ON	55OFF
From	487N	1.000	1.000	1.000	1.000	1.000
	TAFN	1.000	1.000	1.000	1.000	1.000
	487S	1.000	1.000	1.000	1.000	1.000
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	1.000	1.000	1.000	1.000	1.000

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To				
		487N	TAFN	487S	55ON	55OFF
From	487N	0.0	0.0	0.0	0.0	0.0
	TAFN	0.0	0.0	0.0	0.0	0.0
	487S	0.0	0.0	0.0	0.0	0.0
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	0.0	0.0	0.0	0.0	0.0

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
487N	0.76	27.56	2.89	9.00	D	329.79	494.69	138.01	16.74	1.53	138.04	16.74
TAFN	0.76	24.26	3.05	10.00	C	394.58	591.86	146.58	14.86	1.63	146.61	14.86
487S	0.75	11.51	2.94	7.00	B	784.56	1176.84	158.85	8.10	1.77	158.88	8.10
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.90	26.44	7.91	29.00	D	954.32	1431.48	316.22	13.25	3.51	316.26	13.26

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	270.58	67.64	267.66	520.52	797.31	0.00	635.29	472.30	0.426	0.00	0.73	9.717	A
TAFN	323.73	80.93	320.62	335.38	729.59	0.00	732.95	572.03	0.442	0.00	0.78	8.667	A
487S	643.69	160.92	639.78	812.44	237.77	0.00	1294.94	1209.10	0.497	0.00	0.98	5.465	A
55ON	Exit-only	Exit-only	Exit-only	337.50	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	782.97	195.74	777.78	0.00	540.06	0.00	1377.64	1103.15	0.568	0.00	1.30	5.951	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	323.09	80.77	321.28	623.62	954.59	0.00	588.40	472.30	0.549	0.73	1.18	13.386	B
TAFN	386.56	96.64	384.64	401.69	874.19	0.00	685.11	572.03	0.564	0.78	1.26	11.901	B
487S	768.63	192.16	766.60	973.53	285.30	0.00	1277.30	1209.10	0.602	0.98	1.48	7.021	A
55ON	Exit-only	Exit-only	Exit-only	404.71	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	934.94	233.73	931.02	0.00	647.19	0.00	1333.04	1103.15	0.701	1.30	2.28	8.867	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	395.71	98.93	389.64	758.89	1156.30	0.00	528.26	472.30	0.749	1.18	2.70	24.936	C
TAFN	473.44	118.36	467.04	487.91	1058.03	0.00	624.28	572.03	0.758	1.26	2.86	22.038	C
487S	941.37	235.34	935.83	1178.77	346.30	0.00	1254.67	1209.10	0.750	1.48	2.87	11.099	B
55ON	Exit-only	Exit-only	Exit-only	492.52	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1145.06	286.27	1125.57	0.00	789.61	0.00	1273.75	1103.15	0.899	2.28	7.15	21.892	C

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	395.71	98.93	394.92	765.47	1171.10	0.00	523.84	472.30	0.755	2.70	2.89	27.556	D
TAFN	473.44	118.36	472.65	492.94	1073.09	0.00	619.30	572.03	0.764	2.86	3.05	24.261	C
487S	941.37	235.34	941.07	1195.13	350.61	0.00	1253.07	1209.10	0.751	2.87	2.94	11.508	B
55ON	Exit-only	Exit-only	Exit-only	497.11	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1145.06	286.27	1142.00	0.00	794.57	0.00	1271.69	1103.15	0.900	7.15	7.91	26.441	D

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	323.09	80.77	329.49	633.62	977.66	0.00	581.52	472.30	0.556	2.89	1.29	14.625	B
TAFN	386.56	96.64	393.30	409.42	897.74	0.00	677.32	572.03	0.571	3.05	1.37	12.957	B
487S	768.63	192.16	774.21	999.07	291.97	0.00	1274.83	1209.10	0.603	2.94	1.55	7.268	A
55ON	Exit-only	Exit-only	Exit-only	411.70	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	934.94	233.73	956.80	0.00	654.48	0.00	1330.00	1103.15	0.703	7.91	2.45	10.173	B

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	270.58	67.64	272.70	526.28	806.71	0.00	632.49	472.30	0.428	1.29	0.76	10.065	B
TAFN	323.73	80.93	325.96	339.15	740.26	0.00	729.42	572.03	0.444	1.37	0.81	8.971	A
487S	643.69	160.92	645.87	824.34	241.88	0.00	1293.41	1209.10	0.498	1.55	1.00	5.579	A
55ON	Exit-only	Exit-only	Exit-only	342.15	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	782.97	195.74	787.39	0.00	545.60	0.00	1375.33	1103.15	0.569	2.45	1.34	6.169	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	10.33	0.69	9.717	A	A
TAFN	11.07	0.74	8.667	A	A
487S	14.07	0.94	5.465	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	18.55	1.24	5.951	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	16.72	1.11	13.386	B	B
TAFN	17.87	1.19	11.901	B	B
487S	21.36	1.42	7.021	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	32.15	2.14	8.867	A	A

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	35.62	2.37	24.936	C	C
TAFN	37.95	2.53	22.038	C	C
487S	39.75	2.65	11.099	B	B
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	88.32	5.89	21.892	C	C

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	42.26	2.82	27.556	D	C
TAFN	44.69	2.98	24.261	C	C
487S	43.71	2.91	11.508	B	B
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	113.96	7.60	26.441	D	C

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	21.10	1.41	14.625	B	B
TAFN	22.28	1.49	12.957	B	B
487S	24.42	1.63	7.268	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	42.24	2.82	10.173	B	B

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	11.98	0.80	10.065	B	B
TAFN	12.74	0.85	8.971	A	A
487S	15.55	1.04	5.579	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	21.01	1.40	6.169	A	A

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	0.73	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
TAFN	0.78	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
487S	0.98	~1	~1	~1	~1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.30	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:00-08:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.18	0.00	0.00	2.00	2.00			N/A	N/A
TAFN	1.26	0.00	0.00	2.00	3.00			N/A	N/A
487S	1.48	0.00	0.00	3.00	4.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	2.28	0.00	0.00	5.00	8.00			N/A	N/A

Queue Variation results: (08:15-08:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	2.70	0.00	0.00	3.00	9.00			N/A	N/A
TAFN	2.86	0.00	0.00	3.00	10.00			N/A	N/A
487S	2.87	0.00	0.00	0.00	7.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	7.15	0.00	0.00	16.00	28.00			N/A	N/A

Queue Variation results: (08:30-08:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	2.89	0.00	0.00	2.00	8.00			N/A	N/A
TAFN	3.05	0.00	0.00	1.00	8.00			N/A	N/A
487S	2.94	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	7.91	0.00	0.00	12.00	29.00			N/A	N/A

Queue Variation results: (08:45-09:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.29	0.00	0.00	2.00	4.00			N/A	N/A
TAFN	1.37	0.00	0.00	2.00	4.00			N/A	N/A
487S	1.55	0.00	0.00	3.00	4.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	2.45	0.00	0.00	5.00	8.00			N/A	N/A

Queue Variation results: (09:00-09:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	0.76	0.00	0.00	1.00	2.00			N/A	N/A
TAFN	0.81	0.00	0.00	1.00	2.00			N/A	N/A
487S	1.00	0.00	0.00	1.00	3.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.34	0.00	0.00	1.00	4.00			N/A	N/A

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base, PM	2017 Base	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	J9 A55 EB	Roundabout	487N,TAFN,487S,55ON,55OFF				35.89	E

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
487N	487N	(untitled)	
TAFN	TAFN	(untitled)	
487S	487S	(untitled)	
55ON	55ON	(untitled)	
55OFF	55OFF	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
487N	0.00	99999.00		0.00
TAFN	0.00	99999.00		0.00
487S	0.00	99999.00		0.00
55ON	0.00	99999.00		0.00
55OFF	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
487N	3.73	5.44	10.30	24.00	63.00	35.00	
TAFN	3.40	5.20	29.00	38.00	63.00	34.00	
487S	7.60	9.28	4.80	25.00	63.00	36.00	
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
55OFF	7.20	9.80	26.00	19.00	63.00	80.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
487N		(calculated)	(calculated)	0.497	1455.047
TAFN		(calculated)	(calculated)	0.509	1499.011
487S		(calculated)	(calculated)	0.675	2514.839
55ON		(calculated)	(calculated)	Exit-only	Exit-only
55OFF		(calculated)	(calculated)	0.595	2289.212

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
487N	Percentage			60.00
TAFN	Percentage			65.00
487S	Percentage			55.00
55ON	Percentage			70.00
55OFF	Percentage			70.00

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
487N	ONE HOUR	✓	362.00	100.000
TAFN	ONE HOUR	✓	621.00	100.000
487S	ONE HOUR	✓	759.00	100.000
55ON	Exit-only	✓	Exit-only	Exit-only
55OFF	ONE HOUR	✓	667.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	487N	272.53	272.53		
16:15-16:30	TAFN	467.52	467.52		
16:15-16:30	487S	571.41	571.41		
16:15-16:30	55ON	Exit-only	0.00		
16:15-16:30	55OFF	502.15	502.15		
16:30-16:45	487N	325.43	325.43		
16:30-16:45	TAFN	558.27	558.27		
16:30-16:45	487S	682.33	682.33		
16:30-16:45	55ON	Exit-only	0.00		
16:30-16:45	55OFF	599.62	599.62		
16:45-17:00	487N	398.57	398.57		
16:45-17:00	TAFN	683.73	683.73		
16:45-17:00	487S	835.67	835.67		
16:45-17:00	55ON	Exit-only	0.00		
16:45-17:00	55OFF	734.38	734.38		
17:00-17:15	487N	398.57	398.57		
17:00-17:15	TAFN	683.73	683.73		
17:00-17:15	487S	835.67	835.67		
17:00-17:15	55ON	Exit-only	0.00		
17:00-17:15	55OFF	734.38	734.38		
17:15-17:30	487N	325.43	325.43		
17:15-17:30	TAFN	558.27	558.27		
17:15-17:30	487S	682.33	682.33		
17:15-17:30	55ON	Exit-only	0.00		
17:15-17:30	55OFF	599.62	599.62		
17:30-17:45	487N	272.53	272.53		
17:30-17:45	TAFN	467.52	467.52		
17:30-17:45	487S	571.41	571.41		
17:30-17:45	55ON	Exit-only	0.00		
17:30-17:45	55OFF	502.15	502.15		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To				
		487N	TAFN	487S	55ON	55OFF
From	487N	0.000	25.000	242.000	95.000	0.000
	TAFN	158.000	0.000	260.000	203.000	0.000
	487S	276.000	169.000	0.000	314.000	0.000
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	63.000	111.000	493.000	0.000	0.000

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To				
		487N	TAFN	487S	55ON	55OFF
From	487N	0.00	0.07	0.67	0.26	0.00
	TAFN	0.25	0.00	0.42	0.33	0.00
	487S	0.36	0.22	0.00	0.41	0.00
	55ON	0.20	0.20	0.20	0.20	0.20
	55OFF	0.09	0.17	0.74	0.00	0.00

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To				
		487N	TAFN	487S	55ON	55OFF
From	487N	1.000	1.000	1.000	1.000	1.000
	TAFN	1.000	1.000	1.000	1.000	1.000
	487S	1.000	1.000	1.000	1.000	1.000
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	1.000	1.000	1.000	1.000	1.000

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To				
		487N	TAFN	487S	55ON	55OFF
From	487N	0.0	0.0	0.0	0.0	0.0
	TAFN	0.0	0.0	0.0	0.0	0.0
	487S	0.0	0.0	0.0	0.0	0.0
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	0.0	0.0	0.0	0.0	0.0

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
487N	0.64	16.26	1.76	3.00	C	332.18	498.27	98.05	11.81	1.09	98.07	11.81
TAFN	1.02	111.30	21.34	65.00	F	569.84	854.76	631.22	44.31	7.01	631.32	44.32
487S	0.69	9.78	2.23	3.00	A	696.47	1044.71	126.96	7.29	1.41	126.97	7.29
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.55	6.05	1.22	1.00	A	612.05	918.08	75.67	4.95	0.84	75.67	4.95

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	272.53	68.13	270.02	371.23	579.24	0.00	700.32	429.61	0.389	0.00	0.63	8.319	A
TAFN	467.52	116.88	461.52	228.35	620.92	0.00	768.91	521.40	0.608	0.00	1.50	11.500	B
487S	571.41	142.85	568.12	743.28	339.15	0.00	1257.32	1207.96	0.454	0.00	0.82	5.198	A
55ON	Exit-only	Exit-only	Exit-only	456.76	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	502.15	125.54	499.97	0.00	450.51	0.00	1414.91	1158.63	0.355	0.00	0.55	3.925	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	325.43	81.36	324.20	444.59	693.77	0.00	666.17	429.61	0.489	0.63	0.93	10.488	B
TAFN	558.27	139.57	552.21	273.61	744.37	0.00	728.06	521.40	0.767	1.50	3.02	19.799	C
487S	682.33	170.58	680.74	890.48	406.09	0.00	1232.48	1207.96	0.554	0.82	1.22	6.507	A
55ON	Exit-only	Exit-only	Exit-only	547.22	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	599.62	149.90	598.75	0.00	539.61	0.00	1377.82	1158.63	0.435	0.55	0.76	4.616	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	398.57	99.64	395.43	534.04	848.61	0.00	620.00	429.61	0.643	0.93	1.72	15.808	C
TAFN	683.73	170.93	638.12	334.44	909.60	0.00	673.39	521.40	1.015	3.02	14.42	65.258	F
487S	835.67	208.92	831.85	1073.00	474.73	0.00	1207.01	1207.96	0.692	1.22	2.18	9.497	A
55ON	Exit-only	Exit-only	Exit-only	656.51	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	734.38	183.60	732.59	0.00	650.07	0.00	1331.84	1158.63	0.551	0.76	1.21	5.989	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	398.57	99.64	398.40	540.08	850.99	0.00	619.29	429.61	0.644	1.72	1.76	16.263	C
TAFN	683.73	170.93	656.06	335.74	913.65	0.00	672.05	521.40	1.017	14.42	21.34	111.298	F
487S	835.67	208.92	835.46	1083.78	485.93	0.00	1202.86	1207.96	0.695	2.18	2.23	9.784	A
55ON	Exit-only	Exit-only	Exit-only	664.64	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	734.38	183.60	734.33	0.00	656.75	0.00	1329.06	1158.63	0.553	1.21	1.22	6.053	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	325.43	81.36	328.56	466.17	697.33	0.00	665.11	429.61	0.489	1.76	0.98	10.794	B
TAFN	558.27	139.57	628.45	275.52	750.36	0.00	726.08	521.40	0.769	21.34	3.79	50.732	F
487S	682.33	170.58	686.05	927.25	451.56	0.00	1215.61	1207.96	0.561	2.23	1.30	6.846	A
55ON	Exit-only	Exit-only	Exit-only	575.48	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	599.62	149.90	601.37	0.00	562.12	0.00	1368.45	1158.63	0.438	1.22	0.79	4.705	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	272.53	68.13	273.86	377.13	583.20	0.00	699.14	429.61	0.390	0.98	0.65	8.491	A
TAFN	467.52	116.88	476.24	230.27	626.78	0.00	766.97	521.40	0.610	3.79	1.61	12.731	B
487S	571.41	142.85	573.23	754.31	348.72	0.00	1253.77	1207.96	0.456	1.30	0.85	5.303	A
55ON	Exit-only	Exit-only	Exit-only	464.69	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	502.15	125.54	503.08	0.00	457.25	0.00	1412.10	1158.63	0.356	0.79	0.56	3.964	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	8.97	0.60	8.319	A	A
TAFN	20.80	1.39	11.500	B	B
487S	11.92	0.79	5.198	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	7.98	0.53	3.925	A	A

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	13.42	0.89	10.488	B	B
TAFN	40.49	2.70	19.799	C	B
487S	17.68	1.18	6.507	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	11.19	0.75	4.616	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	23.87	1.59	15.808	C	B
TAFN	145.59	9.71	65.258	F	E
487S	30.71	2.05	9.497	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	17.55	1.17	5.989	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	26.17	1.74	16.263	C	B
TAFN	270.33	18.02	111.298	F	F
487S	33.17	2.21	9.784	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	18.30	1.22	6.053	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	15.52	1.03	10.794	B	B
TAFN	127.56	8.50	50.732	F	D
487S	20.39	1.36	6.846	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	12.14	0.81	4.705	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	10.10	0.67	8.491	A	A
TAFN	26.45	1.76	12.731	B	B
487S	13.09	0.87	5.303	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	8.51	0.57	3.964	A	A

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	0.63	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
TAFN	1.50	0.00	0.00	1.00	2.00			N/A	N/A
487S	0.82	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.55	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	0.93	0.00	0.00	1.00	1.00			N/A	N/A
TAFN	3.02	0.00	0.00	7.00	10.00			N/A	N/A
487S	1.22	0.00	0.00	2.00	3.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.76	0.00	0.00	0.00	1.00			N/A	N/A

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.72	0.00	0.00	0.00	3.00			N/A	N/A
TAFN	14.42	0.00	9.00	32.00	42.00			N/A	N/A
487S	2.18	0.00	0.00	0.00	3.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.21	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.76	0.00	0.00	0.00	3.00			N/A	N/A
TAFN	21.34	0.00	13.00	49.00	65.00			N/A	N/A
487S	2.23	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.22	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	0.98	0.00	0.00	1.00	2.00			N/A	N/A
TAFN	3.79	0.00	0.00	8.00	14.00			N/A	N/A
487S	1.30	0.00	0.00	2.00	3.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.79	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:30-17:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	0.65	0.00	0.00	1.00	1.00			N/A	N/A
TAFN	1.61	0.00	0.00	0.00	4.00			N/A	N/A
487S	0.85	0.00	0.00	1.00	2.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.56	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base, AM	2023 Base	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	J9 A55 EB	Roundabout	487N,TAFN,487S,55ON,55OFF				41.41	E

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
487N	487N	(untitled)	
TAFN	TAFN	(untitled)	
487S	487S	(untitled)	
55ON	55ON	(untitled)	
55OFF	55OFF	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
487N	0.00	99999.00		0.00
TAFN	0.00	99999.00		0.00
487S	0.00	99999.00		0.00
55ON	0.00	99999.00		0.00
55OFF	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
487N	3.73	5.44	10.30	24.00	63.00	35.00	
TAFN	3.40	5.20	29.00	38.00	63.00	34.00	
487S	7.60	9.28	4.80	25.00	63.00	36.00	
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
55OFF	7.20	9.80	26.00	19.00	63.00	80.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
487N		(calculated)	(calculated)	0.497	1455.047
TAFN		(calculated)	(calculated)	0.509	1499.011
487S		(calculated)	(calculated)	0.675	2514.839
55ON		(calculated)	(calculated)	Exit-only	Exit-only
55OFF		(calculated)	(calculated)	0.595	2289.212

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
487N	Percentage			60.00
TAFN	Percentage			65.00
487S	Percentage			55.00
55ON	Percentage			70.00
55OFF	Percentage			70.00

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
487N	ONE HOUR	✓	385.00	100.000
TAFN	ONE HOUR	✓	461.00	100.000
487S	ONE HOUR	✓	927.00	100.000
55ON	Exit-only	✓	Exit-only	Exit-only
55OFF	ONE HOUR	✓	1122.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	487N	289.85	289.85		
07:45-08:00	TAFN	347.06	347.06		
07:45-08:00	487S	697.89	697.89		
07:45-08:00	55ON	Exit-only	0.00		
07:45-08:00	55OFF	844.70	844.70		
08:00-08:15	487N	346.11	346.11		
08:00-08:15	TAFN	414.43	414.43		
08:00-08:15	487S	833.35	833.35		
08:00-08:15	55ON	Exit-only	0.00		
08:00-08:15	55OFF	1008.65	1008.65		
08:15-08:30	487N	423.89	423.89		
08:15-08:30	TAFN	507.57	507.57		
08:15-08:30	487S	1020.65	1020.65		
08:15-08:30	55ON	Exit-only	0.00		
08:15-08:30	55OFF	1235.35	1235.35		
08:30-08:45	487N	423.89	423.89		
08:30-08:45	TAFN	507.57	507.57		
08:30-08:45	487S	1020.65	1020.65		
08:30-08:45	55ON	Exit-only	0.00		
08:30-08:45	55OFF	1235.35	1235.35		
08:45-09:00	487N	346.11	346.11		
08:45-09:00	TAFN	414.43	414.43		
08:45-09:00	487S	833.35	833.35		
08:45-09:00	55ON	Exit-only	0.00		
08:45-09:00	55OFF	1008.65	1008.65		
09:00-09:15	487N	289.85	289.85		
09:00-09:15	TAFN	347.06	347.06		
09:00-09:15	487S	697.89	697.89		
09:00-09:15	55ON	Exit-only	0.00		
09:00-09:15	55OFF	844.70	844.70		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To				
		487N	TAFN	487S	55ON	55OFF
From	487N	0.000	16.000	270.000	99.000	0.000
	TAFN	83.000	0.000	217.000	161.000	0.000
	487S	465.000	226.000	0.000	236.000	0.000
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	198.000	237.000	687.000	0.000	0.000

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To				
		487N	TAFN	487S	55ON	55OFF
From	487N	0.00	0.04	0.70	0.26	0.00
	TAFN	0.18	0.00	0.47	0.35	0.00
	487S	0.50	0.24	0.00	0.25	0.00
	55ON	0.20	0.20	0.20	0.20	0.20
	55OFF	0.18	0.21	0.61	0.00	0.00

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To				
		487N	TAFN	487S	55ON	55OFF
From	487N	1.000	1.000	1.000	1.000	1.000
	TAFN	1.000	1.000	1.000	1.000	1.000
	487S	1.000	1.000	1.000	1.000	1.000
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	1.000	1.000	1.000	1.000	1.000

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To				
		487N	TAFN	487S	55ON	55OFF
From	487N	0.0	0.0	0.0	0.0	0.0
	TAFN	0.0	0.0	0.0	0.0	0.0
	487S	0.0	0.0	0.0	0.0	0.0
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	0.0	0.0	0.0	0.0	0.0

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
487N	0.85	42.70	4.70	17.00	E	353.28	529.92	196.81	22.28	2.19	196.85	22.29
TAFN	0.85	37.97	5.01	18.00	E	423.02	634.53	210.05	19.86	2.33	210.10	19.87
487S	0.82	15.94	4.36	14.00	C	850.63	1275.95	213.74	10.05	2.37	213.77	10.05
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.99	63.43	21.40	80.00	F	1029.57	1544.35	632.43	24.57	7.03	632.49	24.57

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	289.85	72.46	286.38	557.49	859.37	0.00	616.79	471.51	0.470	0.00	0.87	10.786	B
TAFN	347.06	86.77	343.36	357.98	787.77	0.00	713.70	569.63	0.486	0.00	0.93	9.628	A
487S	697.89	174.47	693.24	875.75	255.37	0.00	1288.40	1208.92	0.542	0.00	1.16	6.002	A
55ON	Exit-only	Exit-only	Exit-only	370.04	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	844.70	211.18	838.29	0.00	578.57	0.00	1361.60	1106.62	0.620	0.00	1.60	6.800	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	346.11	86.53	343.55	667.66	1028.08	0.00	566.49	471.51	0.611	0.87	1.50	15.961	C
TAFN	414.43	103.61	411.71	428.52	943.11	0.00	662.30	569.63	0.626	0.93	1.61	14.207	B
487S	833.35	208.34	830.56	1048.57	306.25	0.00	1269.53	1208.92	0.656	1.16	1.86	8.148	A
55ON	Exit-only	Exit-only	Exit-only	443.58	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1008.65	252.16	1002.50	0.00	693.24	0.00	1313.87	1106.62	0.768	1.60	3.14	11.338	B

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	423.89	105.97	413.58	806.00	1223.06	0.00	508.35	471.51	0.834	1.50	4.08	34.732	D
TAFN	507.57	126.89	496.49	514.24	1122.40	0.00	602.98	569.63	0.842	1.61	4.38	31.006	D
487S	1020.65	255.16	1011.47	1249.76	369.13	0.00	1246.19	1208.92	0.819	1.86	4.16	14.780	B
55ON	Exit-only	Exit-only	Exit-only	537.25	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1235.35	308.84	1185.71	0.00	843.35	0.00	1251.38	1106.62	0.987	3.14	15.55	39.184	E

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	423.89	105.97	421.44	816.38	1246.72	0.00	501.29	471.51	0.846	4.08	4.70	42.704	E
TAFN	507.57	126.89	505.03	522.15	1146.01	0.00	595.17	569.63	0.853	4.38	5.01	37.973	E
487S	1020.65	255.16	1019.85	1275.37	375.68	0.00	1243.77	1208.92	0.821	4.16	4.36	15.936	C
55ON	Exit-only	Exit-only	Exit-only	544.39	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1235.35	308.84	1211.96	0.00	851.14	0.00	1248.14	1106.62	0.990	15.55	21.40	63.425	F

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	346.11	86.53	357.62	690.21	1094.81	0.00	546.59	471.51	0.633	4.70	1.82	20.077	C
TAFN	414.43	103.61	426.85	448.45	1003.98	0.00	642.17	569.63	0.645	5.01	1.91	17.583	C
487S	833.35	208.34	842.86	1112.94	317.89	0.00	1265.21	1208.92	0.659	4.36	1.98	8.707	A
55ON	Exit-only	Exit-only	Exit-only	455.61	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1008.65	252.16	1079.89	0.00	705.13	0.00	1308.92	1106.62	0.771	21.40	3.59	20.062	C

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	289.85	72.46	293.44	565.20	872.83	0.00	612.78	471.51	0.473	1.82	0.92	11.394	B
TAFN	347.06	86.77	350.77	363.14	803.14	0.00	708.62	569.63	0.490	1.91	0.98	10.162	B
487S	697.89	174.47	701.00	892.79	261.11	0.00	1286.27	1208.92	0.543	1.98	1.20	6.182	A
55ON	Exit-only	Exit-only	Exit-only	376.43	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	844.70	211.18	852.34	0.00	585.69	0.00	1358.64	1106.62	0.622	3.59	1.68	7.213	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	12.20	0.81	10.786	B	B
TAFN	13.10	0.87	9.628	A	A
487S	16.69	1.11	6.002	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	22.71	1.51	6.800	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	21.02	1.40	15.961	C	B
TAFN	22.51	1.50	14.207	B	B
487S	26.59	1.77	8.148	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	43.33	2.89	11.338	B	B

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	50.96	3.40	34.732	D	C
TAFN	54.86	3.66	31.006	D	C
487S	55.63	3.71	14.780	B	B
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	163.49	10.90	39.184	E	D

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	66.75	4.45	42.704	E	D
TAFN	71.38	4.76	37.973	E	D
487S	64.18	4.28	15.936	C	B
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	280.18	18.68	63.425	F	E

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	31.28	2.09	20.077	C	C
TAFN	32.68	2.18	17.583	C	B
487S	31.88	2.13	8.707	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	96.10	6.41	20.062	C	C

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	14.60	0.97	11.394	B	B
TAFN	15.53	1.04	10.162	B	B
487S	18.77	1.25	6.182	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	26.63	1.78	7.213	A	A

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	0.87	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
TAFN	0.93	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
487S	1.16	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.60	0.00	0.00	2.00	2.00			N/A	N/A

Queue Variation results: (08:00-08:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.50	0.00	0.00	3.00	4.00			N/A	N/A
TAFN	1.61	0.00	0.00	3.00	4.00			N/A	N/A
487S	1.86	0.00	0.00	4.00	6.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	3.14	0.00	0.00	7.00	11.00			N/A	N/A

Queue Variation results: (08:15-08:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	4.08	0.00	0.00	9.00	15.00			N/A	N/A
TAFN	4.38	0.00	0.00	9.00	16.00			N/A	N/A
487S	4.16	0.00	0.00	5.00	14.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	15.55	0.00	7.00	39.00	54.00			N/A	N/A

Queue Variation results: (08:30-08:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	4.70	0.00	0.00	7.00	17.00			N/A	N/A
TAFN	5.01	0.00	0.00	8.00	18.00			N/A	N/A
487S	4.36	0.00	0.00	0.00	9.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	21.40	0.00	8.00	56.00	80.00			N/A	N/A

Queue Variation results: (08:45-09:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.82	0.00	0.00	3.00	6.00			N/A	N/A
TAFN	1.91	0.00	0.00	4.00	6.00			N/A	N/A
487S	1.98	0.00	0.00	4.00	6.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	3.59	0.00	0.00	7.00	13.00			N/A	N/A

Queue Variation results: (09:00-09:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	0.92	0.00	0.00	1.00	2.00			N/A	N/A
TAFN	0.98	0.00	0.00	1.00	3.00			N/A	N/A
487S	1.20	0.00	0.00	2.00	3.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.68	0.00	0.00	0.00	4.00			N/A	N/A

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base, PM	2023 Base	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	J9 A55 EB	Roundabout	487N,TAFN,487S,55ON,55OFF				76.61	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
487N	487N	(untitled)	
TAFN	TAFN	(untitled)	
487S	487S	(untitled)	
55ON	55ON	(untitled)	
55OFF	55OFF	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
487N	0.00	99999.00		0.00
TAFN	0.00	99999.00		0.00
487S	0.00	99999.00		0.00
55ON	0.00	99999.00		0.00
55OFF	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
487N	3.73	5.44	10.30	24.00	63.00	35.00	
TAFN	3.40	5.20	29.00	38.00	63.00	34.00	
487S	7.60	9.28	4.80	25.00	63.00	36.00	
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
55OFF	7.20	9.80	26.00	19.00	63.00	80.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
487N		(calculated)	(calculated)	0.497	1455.047
TAFN		(calculated)	(calculated)	0.509	1499.011
487S		(calculated)	(calculated)	0.675	2514.839
55ON		(calculated)	(calculated)	Exit-only	Exit-only
55OFF		(calculated)	(calculated)	0.595	2289.212

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
487N	Percentage			60.00
TAFN	Percentage			65.00
487S	Percentage			55.00
55ON	Percentage			70.00
55OFF	Percentage			70.00

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
487N	ONE HOUR	✓	388.00	100.000
TAFN	ONE HOUR	✓	664.00	100.000
487S	ONE HOUR	✓	825.00	100.000
55ON	Exit-only	✓	Exit-only	Exit-only
55OFF	ONE HOUR	✓	781.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	487N	292.11	292.11		
16:15-16:30	TAFN	499.89	499.89		
16:15-16:30	487S	621.10	621.10		
16:15-16:30	55ON	Exit-only	0.00		
16:15-16:30	55OFF	587.98	587.98		
16:30-16:45	487N	348.80	348.80		
16:30-16:45	TAFN	596.92	596.92		
16:30-16:45	487S	741.66	741.66		
16:30-16:45	55ON	Exit-only	0.00		
16:30-16:45	55OFF	702.10	702.10		
16:45-17:00	487N	427.20	427.20		
16:45-17:00	TAFN	731.08	731.08		
16:45-17:00	487S	908.34	908.34		
16:45-17:00	55ON	Exit-only	0.00		
16:45-17:00	55OFF	859.90	859.90		
17:00-17:15	487N	427.20	427.20		
17:00-17:15	TAFN	731.08	731.08		
17:00-17:15	487S	908.34	908.34		
17:00-17:15	55ON	Exit-only	0.00		
17:00-17:15	55OFF	859.90	859.90		
17:15-17:30	487N	348.80	348.80		
17:15-17:30	TAFN	596.92	596.92		
17:15-17:30	487S	741.66	741.66		
17:15-17:30	55ON	Exit-only	0.00		
17:15-17:30	55OFF	702.10	702.10		
17:30-17:45	487N	292.11	292.11		
17:30-17:45	TAFN	499.89	499.89		
17:30-17:45	487S	621.10	621.10		
17:30-17:45	55ON	Exit-only	0.00		
17:30-17:45	55OFF	587.98	587.98		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To				
		487N	TAFN	487S	55ON	55OFF
From	487N	0.000	27.000	259.000	102.000	0.000
	TAFN	169.000	0.000	278.000	217.000	0.000
	487S	297.000	181.000	0.000	347.000	0.000
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	76.000	118.000	587.000	0.000	0.000

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To				
		487N	TAFN	487S	55ON	55OFF
From	487N	0.00	0.07	0.67	0.26	0.00
	TAFN	0.25	0.00	0.42	0.33	0.00
	487S	0.36	0.22	0.00	0.42	0.00
	55ON	0.20	0.20	0.20	0.20	0.20
	55OFF	0.10	0.15	0.75	0.00	0.00

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To				
		487N	TAFN	487S	55ON	55OFF
From	487N	1.000	1.000	1.000	1.000	1.000
	TAFN	1.000	1.000	1.000	1.000	1.000
	487S	1.000	1.000	1.000	1.000	1.000
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	1.000	1.000	1.000	1.000	1.000

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To				
		487N	TAFN	487S	55ON	55OFF
From	487N	0.0	0.0	0.0	0.0	0.0
	TAFN	0.0	0.0	0.0	0.0	0.0
	487S	0.0	0.0	0.0	0.0	0.0
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	0.0	0.0	0.0	0.0	0.0

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
487N	0.73	22.99	2.63	8.00	C	356.04	534.05	132.50	14.89	1.47	132.52	14.89
TAFN	1.16	269.03	58.44	102.00	F	609.30	913.95	1997.99	131.17	22.20	1998.21	131.18
487S	0.75	12.04	2.97	7.00	B	757.03	1135.55	162.23	8.57	1.80	162.26	8.57
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.65	7.87	1.86	2.00	A	716.66	1074.99	108.03	6.03	1.20	108.04	6.03

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	292.11	73.03	289.11	404.34	663.58	0.00	675.17	430.43	0.433	0.00	0.75	9.256	A
TAFN	499.89	124.97	491.96	243.93	708.76	0.00	739.84	515.35	0.676	0.00	1.98	14.111	B
487S	621.10	155.28	617.19	838.73	361.99	0.00	1248.84	1208.91	0.497	0.00	0.98	5.664	A
55ON	Exit-only	Exit-only	Exit-only	496.37	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	587.98	146.99	585.11	0.00	482.81	0.00	1401.47	1161.59	0.420	0.00	0.72	4.395	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	348.80	87.20	347.08	483.27	794.82	0.00	636.04	430.43	0.548	0.75	1.18	12.383	B
TAFN	596.92	149.23	584.80	292.28	849.62	0.00	693.24	515.35	0.861	1.98	5.01	30.244	D
487S	741.66	185.41	739.53	1003.22	431.20	0.00	1223.16	1208.91	0.606	0.98	1.51	7.411	A
55ON	Exit-only	Exit-only	Exit-only	593.41	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	702.10	175.53	700.77	0.00	577.32	0.00	1362.12	1161.59	0.515	0.72	1.05	5.432	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	427.20	106.80	421.84	566.46	971.49	0.00	583.36	430.43	0.732	1.18	2.52	21.593	C
TAFN	731.08	182.77	621.03	356.88	1036.45	0.00	631.42	515.35	1.158	5.01	32.53	125.787	F
487S	908.34	227.09	902.84	1185.56	471.92	0.00	1208.06	1208.91	0.752	1.51	2.89	11.586	B
55ON	Exit-only	Exit-only	Exit-only	693.59	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	859.90	214.97	856.78	0.00	681.16	0.00	1318.90	1161.59	0.652	1.05	1.83	7.738	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	427.20	106.80	426.75	570.24	975.33	0.00	582.21	430.43	0.734	2.52	2.63	22.986	C
TAFN	731.08	182.77	627.40	358.81	1043.27	0.00	629.16	515.35	1.162	32.53	58.44	269.031	F
487S	908.34	227.09	908.02	1193.76	476.91	0.00	1206.20	1208.91	0.753	2.89	2.97	12.038	B
55ON	Exit-only	Exit-only	Exit-only	699.14	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	859.90	214.97	859.79	0.00	685.78	0.00	1316.97	1161.59	0.653	1.83	1.86	7.869	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	348.80	87.20	354.29	510.16	800.40	0.00	634.37	430.43	0.550	2.63	1.26	13.090	B
TAFN	596.92	149.23	678.32	295.07	859.62	0.00	689.93	515.35	0.865	58.44	38.09	256.928	F
487S	741.66	185.41	746.95	1050.48	487.46	0.00	1202.29	1208.91	0.617	2.97	1.65	7.995	A
55ON	Exit-only	Exit-only	Exit-only	628.99	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	702.10	175.53	705.14	0.00	605.42	0.00	1350.43	1161.59	0.520	1.86	1.10	5.606	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	292.11	73.03	294.02	445.43	668.81	0.00	673.61	430.43	0.434	1.26	0.78	9.530	A
TAFN	499.89	124.97	642.90	246.29	716.54	0.00	737.27	515.35	0.678	38.09	2.34	75.221	F
487S	621.10	155.28	623.45	908.41	451.03	0.00	1215.81	1208.91	0.511	1.65	1.06	6.103	A
55ON	Exit-only	Exit-only	Exit-only	549.63	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	587.98	146.99	589.38	0.00	524.85	0.00	1383.96	1161.59	0.425	1.10	0.75	4.540	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	10.64	0.71	9.256	A	A
TAFN	26.89	1.79	14.111	B	B
487S	14.06	0.94	5.664	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	10.42	0.69	4.395	A	A

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	16.78	1.12	12.383	B	B
TAFN	62.77	4.18	30.244	D	C
487S	21.70	1.45	7.411	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	15.30	1.02	5.432	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	33.77	2.25	21.593	C	C
TAFN	289.59	19.31	125.787	F	F
487S	39.94	2.66	11.586	B	B
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	26.09	1.74	7.738	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	38.79	2.59	22.986	C	C
TAFN	682.84	45.52	269.031	F	F
487S	44.04	2.94	12.038	B	B
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	27.69	1.85	7.869	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	20.30	1.35	13.090	B	B
TAFN	724.05	48.27	256.928	F	F
487S	26.03	1.74	7.995	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	17.06	1.14	5.606	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	12.23	0.82	9.530	A	A
TAFN	211.85	14.12	75.221	F	E
487S	16.46	1.10	6.103	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	11.47	0.76	4.540	A	A

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	0.75	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
TAFN	1.98	0.00	0.00	3.00	4.00			N/A	N/A
487S	0.98	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.72	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.18	0.00	0.00	2.00	2.00			N/A	N/A
TAFN	5.01	0.00	1.00	12.00	17.00			N/A	N/A
487S	1.51	0.00	0.00	3.00	4.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.05	0.00	0.00	1.00	2.00			N/A	N/A

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	2.52	0.00	0.00	2.00	8.00			N/A	N/A
TAFN	32.53	10.00	29.00	53.00	62.00			N/A	N/A
487S	2.89	0.00	0.00	1.00	7.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.83	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	2.63	0.00	0.00	1.00	6.00			N/A	N/A
TAFN	58.44	24.00	54.00	90.00	102.00			N/A	N/A
487S	2.97	0.00	0.00	0.00	3.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.86	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.26	0.00	0.00	2.00	3.00			N/A	N/A
TAFN	38.09	15.00	35.00	59.00	68.00			N/A	N/A
487S	1.65	0.00	0.00	3.00	5.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.10	0.00	0.00	1.00	2.00			N/A	N/A

Queue Variation results: (17:30-17:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	0.78	0.00	0.00	1.00	2.00			N/A	N/A
TAFN	2.34	0.00	0.00	0.00	5.00			N/A	N/A
487S	1.06	0.00	0.00	2.00	3.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.75	0.00	0.00	1.00	1.00			N/A	N/A

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base + Dev, AM	2023 Base + Dev	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	J9 A55 EB	Roundabout	487N,TAFN,487S,55ON,55OFF				49.88	E

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
487N	487N	(untitled)	
TAFN	TAFN	(untitled)	
487S	487S	(untitled)	
55ON	55ON	(untitled)	
55OFF	55OFF	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
487N	0.00	99999.00		0.00
TAFN	0.00	99999.00		0.00
487S	0.00	99999.00		0.00
55ON	0.00	99999.00		0.00
55OFF	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
487N	3.73	5.44	10.30	24.00	63.00	35.00	
TAFN	3.40	5.20	29.00	38.00	63.00	34.00	
487S	7.60	9.28	4.80	25.00	63.00	38.00	
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
55OFF	7.20	9.80	26.00	19.00	63.00	80.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
487N		(calculated)	(calculated)	0.497	1455.047
TAFN		(calculated)	(calculated)	0.509	1499.011
487S		(calculated)	(calculated)	0.675	2514.839
55ON		(calculated)	(calculated)	Exit-only	Exit-only
55OFF		(calculated)	(calculated)	0.595	2289.212

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
487N	Percentage			60.00
TAFN	Percentage			65.00
487S	Percentage			55.00
55ON	Percentage			70.00
55OFF	Percentage			70.00

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
487N	ONE HOUR	✓	385.00	100.000
TAFN	ONE HOUR	✓	461.00	100.000
487S	ONE HOUR	✓	1084.00	100.000
55ON	Exit-only	✓	Exit-only	Exit-only
55OFF	ONE HOUR	✓	1122.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	487N	289.85	289.85		
07:45-08:00	TAFN	347.06	347.06		
07:45-08:00	487S	816.09	816.09		
07:45-08:00	55ON	Exit-only	0.00		
07:45-08:00	55OFF	844.70	844.70		
08:00-08:15	487N	346.11	346.11		
08:00-08:15	TAFN	414.43	414.43		
08:00-08:15	487S	974.49	974.49		
08:00-08:15	55ON	Exit-only	0.00		
08:00-08:15	55OFF	1008.65	1008.65		
08:15-08:30	487N	423.89	423.89		
08:15-08:30	TAFN	507.57	507.57		
08:15-08:30	487S	1193.51	1193.51		
08:15-08:30	55ON	Exit-only	0.00		
08:15-08:30	55OFF	1235.35	1235.35		
08:30-08:45	487N	423.89	423.89		
08:30-08:45	TAFN	507.57	507.57		
08:30-08:45	487S	1193.51	1193.51		
08:30-08:45	55ON	Exit-only	0.00		
08:30-08:45	55OFF	1235.35	1235.35		
08:45-09:00	487N	346.11	346.11		
08:45-09:00	TAFN	414.43	414.43		
08:45-09:00	487S	974.49	974.49		
08:45-09:00	55ON	Exit-only	0.00		
08:45-09:00	55OFF	1008.65	1008.65		
09:00-09:15	487N	289.85	289.85		
09:00-09:15	TAFN	347.06	347.06		
09:00-09:15	487S	816.09	816.09		
09:00-09:15	55ON	Exit-only	0.00		
09:00-09:15	55OFF	844.70	844.70		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To				
		487N	TAFN	487S	55ON	55OFF
From	487N	0.000	16.000	270.000	99.000	0.000
	TAFN	83.000	0.000	217.000	161.000	0.000
	487S	463.000	225.000	0.000	396.000	0.000
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	198.000	237.000	687.000	0.000	0.000

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To				
		487N	TAFN	487S	55ON	55OFF
From	487N	0.00	0.04	0.70	0.26	0.00
	TAFN	0.18	0.00	0.47	0.35	0.00
	487S	0.43	0.21	0.00	0.37	0.00
	55ON	0.20	0.20	0.20	0.20	0.20
	55OFF	0.18	0.21	0.61	0.00	0.00

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To				
		487N	TAFN	487S	55ON	55OFF
From	487N	1.000	1.000	1.000	1.000	1.000
	TAFN	1.000	1.000	1.000	1.000	1.000
	487S	1.000	1.000	1.000	1.000	1.000
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	1.000	1.000	1.000	1.000	1.000

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To				
		487N	TAFN	487S	55ON	55OFF
From	487N	0.0	0.0	0.0	0.0	0.0
	TAFN	0.0	0.0	0.0	0.0	0.0
	487S	0.0	0.0	0.0	0.0	0.0
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	0.0	0.0	0.0	0.0	0.0

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
487N	0.84	42.36	4.66	17.00	E	353.28	529.92	195.95	22.19	2.18	195.99	22.19
TAFN	0.85	38.09	5.03	18.00	E	423.02	634.53	210.42	19.90	2.34	210.46	19.90
487S	0.96	46.68	14.64	60.00	E	994.70	1492.05	502.41	20.20	5.58	502.48	20.21
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.99	60.41	20.29	78.00	F	1029.57	1544.35	609.35	23.67	6.77	609.41	23.68

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	289.85	72.46	286.38	555.44	858.36	0.00	617.09	466.81	0.470	0.00	0.87	10.779	B
TAFN	347.06	86.77	343.36	356.97	787.78	0.00	713.70	557.07	0.486	0.00	0.93	9.628	A
487S	816.09	204.02	809.33	875.76	255.37	0.00	1288.40	1208.90	0.633	0.00	1.69	7.415	A
55ON	Exit-only	Exit-only	Exit-only	489.22	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	844.70	211.18	838.31	0.00	575.49	0.00	1362.88	1150.10	0.620	0.00	1.60	6.783	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	346.11	86.53	343.56	664.81	1026.70	0.00	566.90	466.81	0.611	0.87	1.50	15.933	C
TAFN	414.43	103.61	411.71	427.12	943.15	0.00	662.29	557.07	0.626	0.93	1.61	14.208	B
487S	974.49	243.62	968.72	1048.60	306.26	0.00	1269.52	1208.90	0.768	1.69	3.13	11.741	B
55ON	Exit-only	Exit-only	Exit-only	586.02	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1008.65	252.16	1002.56	0.00	688.96	0.00	1315.65	1150.10	0.767	1.60	3.12	11.279	B

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	423.89	105.97	413.70	794.19	1219.69	0.00	509.35	466.81	0.832	1.50	4.05	34.469	D
TAFN	507.57	126.89	496.40	508.89	1124.51	0.00	602.28	557.07	0.843	1.61	4.40	31.154	D
487S	1193.51	298.38	1158.94	1251.79	369.12	0.00	1246.20	1208.90	0.958	3.13	11.78	32.686	D
55ON	Exit-only	Exit-only	Exit-only	703.12	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1235.35	308.84	1188.95	0.00	824.93	0.00	1259.05	1150.10	0.981	3.12	14.72	37.567	E

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	423.89	105.97	421.45	809.88	1244.34	0.00	502.00	466.81	0.844	4.05	4.66	42.365	E
TAFN	507.57	126.89	505.07	519.10	1146.69	0.00	594.94	557.07	0.853	4.40	5.03	38.087	E
487S	1193.51	298.38	1182.05	1276.06	375.70	0.00	1243.76	1208.90	0.960	11.78	14.64	46.675	E
55ON	Exit-only	Exit-only	Exit-only	716.58	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1235.35	308.84	1213.05	0.00	841.17	0.00	1252.29	1150.10	0.986	14.72	20.29	60.405	F

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	346.11	86.53	357.46	701.74	1096.83	0.00	545.99	466.81	0.634	4.66	1.82	20.112	C
TAFN	414.43	103.61	426.94	453.41	1000.87	0.00	643.19	557.07	0.644	5.03	1.90	17.512	C
487S	974.49	243.62	1018.80	1109.93	317.89	0.00	1265.21	1208.90	0.770	14.64	3.56	16.893	C
55ON	Exit-only	Exit-only	Exit-only	613.20	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1008.65	252.16	1075.08	0.00	723.49	0.00	1301.28	1150.10	0.775	20.29	3.69	19.990	C

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	289.85	72.46	293.47	565.26	873.13	0.00	612.69	466.81	0.473	1.82	0.92	11.399	B
TAFN	347.06	86.77	350.73	363.20	803.40	0.00	708.53	557.07	0.490	1.90	0.98	10.160	B
487S	816.09	204.02	823.25	893.04	261.10	0.00	1286.28	1208.90	0.634	3.56	1.77	7.890	A
55ON	Exit-only	Exit-only	Exit-only	498.70	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	844.70	211.18	852.74	0.00	585.65	0.00	1358.66	1150.10	0.622	3.69	1.68	7.226	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	12.19	0.81	10.779	B	B
TAFN	13.10	0.87	9.628	A	A
487S	23.83	1.59	7.415	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	22.65	1.51	6.783	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	20.98	1.40	15.933	C	B
TAFN	22.51	1.50	14.208	B	B
487S	43.29	2.89	11.741	B	B
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	43.12	2.87	11.279	B	B

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	50.62	3.37	34.469	D	C
TAFN	55.09	3.67	31.154	D	C
487S	132.52	8.83	32.686	D	C
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	156.94	10.46	37.567	E	D

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	66.23	4.42	42.365	E	D
TAFN	71.64	4.78	38.087	E	D
487S	200.51	13.37	46.675	E	D
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	265.86	17.72	60.405	F	E

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	31.33	2.09	20.112	C	C
TAFN	32.55	2.17	17.512	C	B
487S	74.06	4.94	16.893	C	B
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	94.10	6.27	19.990	C	B

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	14.60	0.97	11.399	B	B
TAFN	15.53	1.04	10.160	B	B
487S	28.19	1.88	7.890	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	26.68	1.78	7.226	A	A

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	0.87	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
TAFN	0.93	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
487S	1.69	0.00	1.00	2.00	2.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.60	0.00	0.00	2.00	2.00			N/A	N/A

Queue Variation results: (08:00-08:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.50	0.00	0.00	3.00	4.00			N/A	N/A
TAFN	1.61	0.00	0.00	3.00	4.00			N/A	N/A
487S	3.13	0.00	0.00	7.00	11.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	3.12	0.00	0.00	7.00	11.00			N/A	N/A

Queue Variation results: (08:15-08:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	4.05	0.00	0.00	9.00	15.00			N/A	N/A
TAFN	4.40	0.00	0.00	9.00	16.00			N/A	N/A
487S	11.78	0.00	3.00	31.00	45.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	14.72	0.00	6.00	37.00	52.00			N/A	N/A

Queue Variation results: (08:30-08:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	4.66	0.00	0.00	7.00	17.00			N/A	N/A
TAFN	5.03	0.00	0.00	8.00	18.00			N/A	N/A
487S	14.64	0.00	1.00	38.00	60.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	20.29	0.00	7.00	54.00	78.00			N/A	N/A

Queue Variation results: (08:45-09:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.82	0.00	0.00	4.00	6.00			N/A	N/A
TAFN	1.90	0.00	0.00	4.00	6.00			N/A	N/A
487S	3.56	0.00	0.00	7.00	13.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	3.69	0.00	0.00	7.00	13.00			N/A	N/A

Queue Variation results: (09:00-09:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	0.92	0.00	0.00	1.00	2.00			N/A	N/A
TAFN	0.98	0.00	0.00	1.00	3.00			N/A	N/A
487S	1.77	0.00	0.00	1.00	5.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.68	0.00	0.00	0.00	4.00			N/A	N/A

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base + Dev, PM	2023 Base + Dev	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	J9 A55 EB	Roundabout	487N,TAFN,487S,55ON,55OFF				65.13	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
487N	487N	(untitled)	
TAFN	TAFN	(untitled)	
487S	487S	(untitled)	
55ON	55ON	(untitled)	
55OFF	55OFF	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
487N	0.00	99999.00		0.00
TAFN	0.00	99999.00		0.00
487S	0.00	99999.00		0.00
55ON	0.00	99999.00		0.00
55OFF	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
487N	3.73	5.44	10.30	24.00	63.00	35.00	
TAFN	3.40	5.20	29.00	38.00	63.00	34.00	
487S	7.60	9.28	4.80	25.00	63.00	36.00	
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
55OFF	7.20	9.80	26.00	19.00	63.00	80.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
487N		(calculated)	(calculated)	0.497	1455.047
TAFN		(calculated)	(calculated)	0.509	1499.011
487S		(calculated)	(calculated)	0.675	2514.839
55ON		(calculated)	(calculated)	Exit-only	Exit-only
55OFF		(calculated)	(calculated)	0.595	2289.212

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
487N	Percentage			60.00
TAFN	Percentage			65.00
487S	Percentage			55.00
55ON	Percentage			70.00
55OFF	Percentage			70.00

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
487N	ONE HOUR	✓	380.10	100.000
TAFN	ONE HOUR	✓	652.20	100.000
487S	ONE HOUR	✓	851.10	100.000
55ON	Exit-only	✓	Exit-only	Exit-only
55OFF	ONE HOUR	✓	752.50	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	487N	286.16	286.16		
16:15-16:30	TAFN	491.01	491.01		
16:15-16:30	487S	640.75	640.75		
16:15-16:30	55ON	Exit-only	0.00		
16:15-16:30	55OFF	566.52	566.52		
16:30-16:45	487N	341.70	341.70		
16:30-16:45	TAFN	586.31	586.31		
16:30-16:45	487S	765.12	765.12		
16:30-16:45	55ON	Exit-only	0.00		
16:30-16:45	55OFF	676.48	676.48		
16:45-17:00	487N	418.50	418.50		
16:45-17:00	TAFN	718.09	718.09		
16:45-17:00	487S	937.08	937.08		
16:45-17:00	55ON	Exit-only	0.00		
16:45-17:00	55OFF	828.52	828.52		
17:00-17:15	487N	418.50	418.50		
17:00-17:15	TAFN	718.09	718.09		
17:00-17:15	487S	937.08	937.08		
17:00-17:15	55ON	Exit-only	0.00		
17:00-17:15	55OFF	828.52	828.52		
17:15-17:30	487N	341.70	341.70		
17:15-17:30	TAFN	586.31	586.31		
17:15-17:30	487S	765.12	765.12		
17:15-17:30	55ON	Exit-only	0.00		
17:15-17:30	55OFF	676.48	676.48		
17:30-17:45	487N	286.16	286.16		
17:30-17:45	TAFN	491.01	491.01		
17:30-17:45	487S	640.75	640.75		
17:30-17:45	55ON	Exit-only	0.00		
17:30-17:45	55OFF	566.52	566.52		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To				
		487N	TAFN	487S	55ON	55OFF
From	487N	0.000	26.200	253.900	100.000	0.000
	TAFN	166.400	0.000	272.500	213.300	0.000
	487S	289.700	177.500	0.000	383.900	0.000
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	65.700	116.000	570.800	0.000	0.000

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To				
		487N	TAFN	487S	55ON	55OFF
From	487N	0.00	0.07	0.67	0.26	0.00
	TAFN	0.26	0.00	0.42	0.33	0.00
	487S	0.34	0.21	0.00	0.45	0.00
	55ON	0.20	0.20	0.20	0.20	0.20
	55OFF	0.09	0.15	0.76	0.00	0.00

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To				
		487N	TAFN	487S	55ON	55OFF
From	487N	1.000	1.000	1.000	1.000	1.000
	TAFN	1.000	1.000	1.000	1.000	1.000
	487S	1.000	1.000	1.000	1.000	1.000
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	1.000	1.000	1.000	1.000	1.000

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To				
		487N	TAFN	487S	55ON	55OFF
From	487N	0.0	0.0	0.0	0.0	0.0
	TAFN	0.0	0.0	0.0	0.0	0.0
	487S	0.0	0.0	0.0	0.0	0.0
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	0.0	0.0	0.0	0.0	0.0

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
487N	0.71	20.92	2.36	7.00	C	348.79	523.18	122.00	13.99	1.36	122.02	13.99
TAFN	1.13	225.20	48.30	92.00	F	598.47	897.71	1540.16	102.94	17.11	1540.34	102.95
487S	0.78	13.35	3.38	9.00	B	780.98	1171.48	178.62	9.15	1.98	178.65	9.15
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.63	7.31	1.66	2.00	A	690.51	1035.76	98.49	5.71	1.09	98.50	5.71

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	286.16	71.54	283.30	389.31	647.38	0.00	680.00	425.61	0.421	0.00	0.71	9.005	A
TAFN	491.01	122.75	483.63	239.21	691.47	0.00	745.57	509.61	0.659	0.00	1.85	13.395	B
487S	640.75	160.19	636.61	819.00	356.09	0.00	1251.03	1209.62	0.512	0.00	1.04	5.822	A
55ON	Exit-only	Exit-only	Exit-only	519.85	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	566.52	141.63	563.84	0.00	472.85	0.00	1405.61	1173.59	0.403	0.00	0.67	4.263	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	341.70	85.43	340.12	465.60	775.40	0.00	641.83	425.61	0.532	0.71	1.11	11.867	B
TAFN	586.31	146.58	576.21	286.62	828.91	0.00	700.09	509.61	0.837	1.85	4.37	27.050	D
487S	765.12	191.28	762.76	980.18	424.95	0.00	1225.48	1209.62	0.624	1.04	1.63	7.740	A
55ON	Exit-only	Exit-only	Exit-only	621.99	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	676.48	169.12	675.29	0.00	565.72	0.00	1366.95	1173.59	0.495	0.67	0.97	5.197	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	418.50	104.62	413.86	548.47	947.79	0.00	590.42	425.61	0.709	1.11	2.27	19.875	C
TAFN	718.09	179.52	625.68	349.90	1011.76	0.00	639.59	509.61	1.123	4.37	27.47	108.792	F
487S	937.08	234.27	930.52	1164.29	473.14	0.00	1207.60	1209.62	0.776	1.63	3.26	12.695	B
55ON	Exit-only	Exit-only	Exit-only	733.23	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	828.52	207.13	825.83	0.00	670.43	0.00	1323.36	1173.59	0.626	0.97	1.64	7.197	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	418.50	104.62	418.15	553.10	951.43	0.00	589.34	425.61	0.710	2.27	2.36	20.919	C
TAFN	718.09	179.52	634.79	351.86	1017.72	0.00	637.62	509.61	1.126	27.47	48.30	225.197	F
487S	937.08	234.27	936.62	1172.94	479.57	0.00	1205.21	1209.62	0.778	3.26	3.38	13.346	B
55ON	Exit-only	Exit-only	Exit-only	740.09	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	828.52	207.13	828.43	0.00	676.10	0.00	1321.00	1173.59	0.627	1.64	1.66	7.306	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	341.70	85.43	346.42	496.15	780.69	0.00	640.25	425.61	0.534	2.36	1.18	12.438	B
TAFN	586.31	146.58	683.05	289.45	837.66	0.00	697.20	509.61	0.841	48.30	24.11	194.219	F
487S	765.12	191.28	771.46	1031.91	488.80	0.00	1201.79	1209.62	0.637	3.38	1.79	8.485	A
55ON	Exit-only	Exit-only	Exit-only	662.51	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	676.48	169.12	679.09	0.00	597.75	0.00	1353.62	1173.59	0.500	1.66	1.01	5.357	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	286.16	71.54	287.90	416.38	652.44	0.00	678.49	425.61	0.422	1.18	0.74	9.258	A
TAFN	491.01	122.75	579.16	241.58	698.75	0.00	743.16	509.61	0.661	24.11	2.08	33.684	D
487S	640.75	160.19	643.52	864.99	412.92	0.00	1229.95	1209.62	0.521	1.79	1.10	6.169	A
55ON	Exit-only	Exit-only	Exit-only	555.42	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	566.52	141.63	567.80	0.00	501.02	0.00	1393.89	1173.59	0.406	1.01	0.69	4.366	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	10.16	0.68	9.005	A	A
TAFN	25.18	1.68	13.395	B	B
487S	14.89	0.99	5.822	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	9.75	0.65	4.263	A	A

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	15.81	1.05	11.867	B	B
TAFN	55.91	3.73	27.050	D	C
487S	23.31	1.55	7.740	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	14.13	0.94	5.197	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	30.75	2.05	19.875	C	B
TAFN	248.71	16.58	108.792	F	F
487S	44.71	2.98	12.695	B	B
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	23.50	1.57	7.197	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	34.82	2.32	20.919	C	C
TAFN	569.10	37.94	225.197	F	F
487S	50.02	3.33	13.346	B	B
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	24.81	1.65	7.306	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	18.85	1.26	12.438	B	B
TAFN	543.07	36.20	194.219	F	F
487S	28.52	1.90	8.485	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	15.68	1.05	5.357	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	11.62	0.77	9.258	A	A
TAFN	98.20	6.55	33.684	D	C
487S	17.18	1.15	6.169	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	10.61	0.71	4.366	A	A

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	0.71	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
TAFN	1.85	0.00	0.00	3.00	4.00			N/A	N/A
487S	1.04	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.67	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.11	0.00	0.00	1.00	2.00			N/A	N/A
TAFN	4.37	0.00	1.00	10.00	15.00			N/A	N/A
487S	1.63	0.00	0.00	3.00	5.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.97	0.00	0.00	1.00	2.00			N/A	N/A

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	2.27	0.00	0.00	2.00	7.00			N/A	N/A
TAFN	27.47	7.00	24.00	47.00	56.00			N/A	N/A
487S	3.26	0.00	0.00	2.00	9.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.64	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	2.36	0.00	0.00	0.00	5.00			N/A	N/A
TAFN	48.30	16.00	44.00	79.00	92.00			N/A	N/A
487S	3.38	0.00	0.00	0.00	4.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.66	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.18	0.00	0.00	2.00	3.00			N/A	N/A
TAFN	24.11	5.00	20.00	43.00	51.00			N/A	N/A
487S	1.79	0.00	0.00	4.00	5.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.01	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:30-17:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	0.74	0.00	0.00	1.00	2.00			N/A	N/A
TAFN	2.08	0.00	0.00	0.00	4.00			N/A	N/A
487S	1.10	0.00	0.00	2.00	3.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.69	0.00	0.00	0.00	1.00			N/A	N/A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A55 J9\2018 DF
Report generation date: 14/06/2018 16:23:58

» (Default Analysis Set) - 2017 Base, AM
» (Default Analysis Set) - 2017 Base, PM
» (Default Analysis Set) - 2023 Base, AM
» (Default Analysis Set) - 2023 Base, PM
» (Default Analysis Set) - 2023 Base + Dev, AM
» (Default Analysis Set) - 2023 Base + Dev, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2017 Base								
Arm 487N	4.58	14.26	0.83	B	2.66	8.90	0.73	A
Arm 487S	9.05	27.77	0.91	D	0.92	4.40	0.48	A
Arm PARCM	0.33	7.33	0.25	A	7.44	43.65	0.90	E
Arm 55OFF	3.43	19.05	0.78	C	0.53	6.87	0.35	A
A1 - 2023 Base								
Arm 487N	8.20	24.23	0.90	C	4.70	14.16	0.83	B
Arm 487S	30.98	79.35	1.02	F	1.14	4.95	0.54	A
Arm PARCM	0.38	7.96	0.28	A	19.85	101.64	1.01	F
Arm 55OFF	5.72	29.88	0.87	D	0.65	7.57	0.40	A
A1 - 2023 Base + Dev								
Arm 487N	11.38	33.84	0.94	D	6.26	19.12	0.87	C
Arm 487S	99.00	213.58	1.13	F	1.82	6.53	0.65	A
Arm PARCM	0.40	8.33	0.29	A	42.30	200.88	1.11	F
Arm 55OFF	58.72	233.33	1.12	F	1.89	14.28	0.66	B

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:15 - 17:45
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 16:23:51

File summary

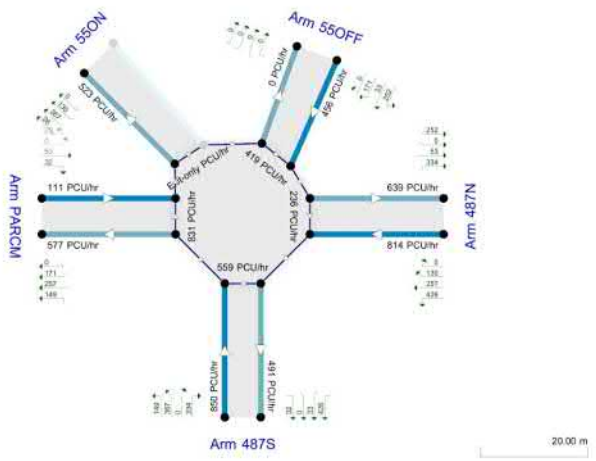
Title	(untitled)
Location	
Site Number	
Date	14/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base, AM	2017 Base	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	487N,487S,PARCM,55ON,55OFF				20.04	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
487N	487N	(untitled)	
487S	487S	(untitled)	
PARCM	PARCM	(untitled)	
55ON	55ON	(untitled)	
55OFF	55OFF	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
487N	0.00	99999.00		0.00
487S	0.00	99999.00		0.00
PARCM	0.00	99999.00		0.00
55ON	0.00	99999.00		0.00
55OFF	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
487N	7.40	9.30	17.20	26.36	63.50	35.00	
487S	7.00	8.00	2.30	17.00	63.50	31.00	
PARCM	3.90	9.20	5.80	16.50	63.50	34.00	
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
55OFF	4.30	7.20	7.00	19.00	63.50	48.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
487N		(calculated)	(calculated)	0.696	2652.736
487S		(calculated)	(calculated)	0.622	2220.513
PARCM		(calculated)	(calculated)	0.507	1552.352
55ON		(calculated)	(calculated)	Exit-only	Exit-only
55OFF		(calculated)	(calculated)	0.500	1571.416

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
487N	Percentage			60.00
487S	Percentage			80.00
PARCM	Percentage			70.00
55ON	None			
55OFF	Percentage			68.00

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
487N	ONE HOUR	✓	1087.00	100.000
487S	ONE HOUR	✓	1135.50	100.000
PARCM	ONE HOUR	✓	148.10	100.000
55ON	Exit-only	✓	Exit-only	Exit-only
55OFF	ONE HOUR	✓	611.10	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	487N	818.35	818.35		
07:45-08:00	487S	854.86	854.86		
07:45-08:00	PARCM	111.50	111.50		

07:45-08:00	55ON	Exit-only	0.00		
07:45-08:00	55OFF	460.07	460.07		
08:00-08:15	487N	977.19	977.19		
08:00-08:15	487S	1020.79	1020.79		
08:00-08:15	PARCM	133.14	133.14		
08:00-08:15	55ON	Exit-only	0.00		
08:00-08:15	55OFF	549.37	549.37		
08:15-08:30	487N	1196.81	1196.81		
08:15-08:30	487S	1250.21	1250.21		
08:15-08:30	PARCM	163.06	163.06		
08:15-08:30	55ON	Exit-only	0.00		
08:15-08:30	55OFF	672.83	672.83		
08:30-08:45	487N	1196.81	1196.81		
08:30-08:45	487S	1250.21	1250.21		
08:30-08:45	PARCM	163.06	163.06		
08:30-08:45	55ON	Exit-only	0.00		
08:30-08:45	55OFF	672.83	672.83		
08:45-09:00	487N	977.19	977.19		
08:45-09:00	487S	1020.79	1020.79		
08:45-09:00	PARCM	133.14	133.14		
08:45-09:00	55ON	Exit-only	0.00		
08:45-09:00	55OFF	549.37	549.37		
09:00-09:15	487N	818.35	818.35		
09:00-09:15	487S	854.86	854.86		
09:00-09:15	PARCM	111.50	111.50		
09:00-09:15	55ON	Exit-only	0.00		
09:00-09:15	55OFF	460.07	460.07		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To				
		487N	487S	PARCM	55ON	55OFF
From	487N	0.000	569.000	344.000	174.000	0.000
	487S	446.400	0.000	198.500	490.600	0.000
	PARCM	70.700	42.800	0.000	34.600	0.000
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	338.000	44.200	228.900	0.000	0.000

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To				
		487N	487S	PARCM	55ON	55OFF
From	487N	0.00	0.52	0.32	0.16	0.00
	487S	0.39	0.00	0.17	0.43	0.00
	PARCM	0.48	0.29	0.00	0.23	0.00
	55ON	0.20	0.20	0.20	0.20	0.20
	55OFF	0.55	0.07	0.37	0.00	0.00

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To				
		487N	487S	PARCM	55ON	55OFF
From	487N	1.000	1.000	1.000	1.000	1.000
	487S	1.000	1.000	1.000	1.000	1.000
	PARCM	1.000	1.000	1.000	1.000	1.000
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	1.000	1.000	1.000	1.000	1.000

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To				
		487N	487S	PARCM	55ON	55OFF
From	487N	0.0	0.0	0.0	0.0	0.0
	487S	0.0	0.0	0.0	0.0	0.0
	PARCM	0.0	0.0	0.0	0.0	0.0
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	0.0	0.0	0.0	0.0	0.0

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
487N	0.83	14.26	4.58	15.00	B	997.45	1496.18	223.06	8.95	2.48	223.09	8.95
487S	0.91	27.77	9.05	35.00	D	1041.95	1562.93	344.49	13.22	3.83	344.53	13.23
PARCM	0.25	7.33	0.33	−1	A	135.90	203.85	21.30	6.27	0.24	21.31	6.27
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.78	19.05	3.43	11.00	C	560.76	841.13	172.21	12.28	1.91	172.24	12.29

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	818.35	204.59	813.56	639.25	235.90	0.00	1493.17	1310.45	0.548	0.00	1.20	5.261	A
487S	854.86	213.72	849.63	490.90	558.57	0.00	1498.58	1276.69	0.570	0.00	1.31	5.504	A
PARCM	111.50	27.87	110.85	576.87	831.33	0.00	791.66	613.71	0.141	0.00	0.16	5.284	A
55ON	Exit-only	Exit-only	Exit-only	523.21	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	460.07	115.02	456.19	0.00	418.96	0.00	926.18	643.62	0.497	0.00	0.97	7.599	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	977.19	244.30	974.28	765.74	282.92	0.00	1473.54	1310.45	0.663	1.20	1.92	7.166	A
487S	1020.79	255.20	1016.66	587.98	669.22	0.00	1443.54	1276.69	0.707	1.31	2.34	8.352	A
PARCM	133.14	33.28	132.91	690.99	994.89	0.00	733.62	613.71	0.181	0.16	0.22	5.993	A
55ON	Exit-only	Exit-only	Exit-only	626.26	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	549.37	137.34	547.12	0.00	501.54	0.00	898.12	643.62	0.612	0.97	1.53	10.188	B

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	1196.81	299.20	1186.90	928.50	344.59	0.00	1447.80	1310.45	0.827	1.92	4.40	13.314	B
487S	1250.21	312.55	1227.48	716.46	815.03	0.00	1371.02	1276.69	0.912	2.34	8.03	22.244	C
PARCM	163.06	40.77	162.64	839.62	1202.89	0.00	659.82	613.71	0.247	0.22	0.32	7.234	A
55ON	Exit-only	Exit-only	Exit-only	758.33	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	672.83	168.21	665.88	0.00	607.20	0.00	862.21	643.62	0.780	1.53	3.27	17.726	C

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	1196.81	299.20	1196.08	939.51	347.52	0.00	1446.58	1310.45	0.827	4.40	4.58	14.263	B
487S	1250.21	312.55	1246.11	721.83	821.76	0.00	1367.67	1276.69	0.914	8.03	9.05	27.769	D
PARCM	163.06	40.77	163.04	848.14	1219.74	0.00	653.84	613.71	0.249	0.32	0.33	7.334	A
55ON	Exit-only	Exit-only	Exit-only	767.94	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	672.83	168.21	672.19	0.00	614.84	0.00	859.61	643.62	0.783	3.27	3.43	19.047	C

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	977.19	244.30	987.44	783.14	287.31	0.00	1471.71	1310.45	0.664	4.58	2.02	7.586	A
487S	1020.79	255.20	1046.89	595.73	679.01	0.00	1438.67	1276.69	0.710	9.05	2.52	9.765	A
PARCM	133.14	33.28	133.55	703.96	1021.95	0.00	724.02	613.71	0.184	0.33	0.23	6.100	A
55ON	Exit-only	Exit-only	Exit-only	641.58	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	549.37	137.34	556.53	0.00	513.92	0.00	893.91	643.62	0.615	3.43	1.64	10.886	B

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	818.35	204.59	821.52	647.12	239.03	0.00	1491.86	1310.45	0.549	2.02	1.23	5.394	A
487S	854.86	213.72	859.55	495.78	564.76	0.00	1495.50	1276.69	0.572	2.52	1.35	5.703	A
PARCM	111.50	27.87	111.74	583.52	840.79	0.00	788.30	613.71	0.141	0.23	0.17	5.324	A
55ON	Exit-only	Exit-only	Exit-only	528.98	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	460.07	115.02	462.60	0.00	423.55	0.00	924.62	643.62	0.498	1.64	1.01	7.835	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	17.22	1.15	5.261	A	A
487S	18.78	1.25	5.504	A	A
PARCM	2.38	0.16	5.284	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	13.83	0.92	7.599	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	27.55	1.84	7.166	A	A
487S	33.11	2.21	8.352	A	A
PARCM	3.23	0.22	5.993	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	21.81	1.45	10.188	B	B

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	59.02	3.93	13.314	B	B
487S	97.64	6.51	22.244	C	C
PARCM	4.74	0.32	7.234	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	43.86	2.92	17.726	C	B

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	67.67	4.51	14.263	B	B
487S	129.37	8.62	27.769	D	C
PARCM	4.92	0.33	7.334	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	50.52	3.37	19.047	C	B

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	32.46	2.16	7.586	A	A
487S	44.44	2.96	9.765	A	A
PARCM	3.49	0.23	6.100	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	26.42	1.76	10.886	B	B

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	19.14	1.28	5.394	A	A
487S	21.16	1.41	5.703	A	A
PARCM	2.54	0.17	5.324	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	15.76	1.05	7.835	A	A

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.20	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
487S	1.31	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
PARCM	0.16	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.97	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:00-08:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.92	0.00	0.00	4.00	6.00			N/A	N/A
487S	2.34	0.00	0.00	5.00	8.00			N/A	N/A
PARCM	0.22	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.53	0.00	0.00	3.00	4.00			N/A	N/A

Queue Variation results: (08:15-08:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	4.40	0.00	0.00	4.00	15.00			N/A	N/A
487S	8.03	0.00	0.00	19.00	32.00			N/A	N/A
PARCM	0.32	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	3.27	0.00	0.00	3.00	11.00			N/A	N/A

Queue Variation results: (08:30-08:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	4.58	0.00	0.00	0.00	9.00			N/A	N/A
487S	9.05	0.00	0.00	15.00	35.00			N/A	N/A
PARCM	0.33	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	3.43	0.00	0.00	0.00	8.00			N/A	N/A

Queue Variation results: (08:45-09:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	2.02	0.00	0.00	4.00	6.00			N/A	N/A
487S	2.52	0.00	0.00	5.00	9.00			N/A	N/A
PARCM	0.23	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.64	0.00	0.00	3.00	5.00			N/A	N/A

Queue Variation results: (09:00-09:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.23	0.00	0.00	2.00	4.00			N/A	N/A
487S	1.35	0.00	0.00	1.00	4.00			N/A	N/A
PARCM	0.17	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.01	0.00	0.00	1.00	3.00			N/A	N/A

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base, PM	2017 Base	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	487N,487S,PARCM,55ON,55OFF				15.66	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
487N	487N	(untitled)	
487S	487S	(untitled)	
PARCM	PARCM	(untitled)	
55ON	55ON	(untitled)	
55OFF	55OFF	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
487N	0.00	99999.00		0.00
487S	0.00	99999.00		0.00
PARCM	0.00	99999.00		0.00
55ON	0.00	99999.00		0.00
55OFF	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
487N	7.40	9.30	17.20	26.36	63.50	35.00	
487S	7.00	8.00	2.30	17.00	63.50	31.00	
PARCM	3.90	9.20	5.80	16.50	63.50	34.00	
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
55OFF	4.30	7.20	7.00	19.00	63.50	48.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
487N		(calculated)	(calculated)	0.696	2652.736
487S		(calculated)	(calculated)	0.622	2220.513
PARCM		(calculated)	(calculated)	0.507	1552.352
55ON		(calculated)	(calculated)	Exit-only	Exit-only
55OFF		(calculated)	(calculated)	0.500	1571.416

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
487N	Percentage			60.00
487S	Percentage			80.00
PARCM	Percentage			70.00
55ON	None			
55OFF	Percentage			68.00

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
487N	ONE HOUR	✓	994.10	100.000
487S	ONE HOUR	✓	690.00	100.000
PARCM	ONE HOUR	✓	597.80	100.000
55ON	Exit-only	✓	Exit-only	Exit-only
55OFF	ONE HOUR	✓	254.30	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	487N	748.41	748.41		
16:15-16:30	487S	519.47	519.47		
16:15-16:30	PARCM	450.06	450.06		
16:15-16:30	55ON	Exit-only	0.00		
16:15-16:30	55OFF	191.45	191.45		
16:30-16:45	487N	893.68	893.68		
16:30-16:45	487S	620.30	620.30		
16:30-16:45	PARCM	537.41	537.41		
16:30-16:45	55ON	Exit-only	0.00		
16:30-16:45	55OFF	228.61	228.61		
16:45-17:00	487N	1094.52	1094.52		
16:45-17:00	487S	759.70	759.70		
16:45-17:00	PARCM	658.19	658.19		
16:45-17:00	55ON	Exit-only	0.00		

16:45-17:00	55OFF	279.99	279.99		
17:00-17:15	487N	1094.52	1094.52		
17:00-17:15	487S	759.70	759.70		
17:00-17:15	PARCM	658.19	658.19		
17:00-17:15	55ON	Exit-only	0.00		
17:00-17:15	55OFF	279.99	279.99		
17:15-17:30	487N	893.68	893.68		
17:15-17:30	487S	620.30	620.30		
17:15-17:30	PARCM	537.41	537.41		
17:15-17:30	55ON	Exit-only	0.00		
17:15-17:30	55OFF	228.61	228.61		
17:30-17:45	487N	748.41	748.41		
17:30-17:45	487S	519.47	519.47		
17:30-17:45	PARCM	450.06	450.06		
17:30-17:45	55ON	Exit-only	0.00		
17:30-17:45	55OFF	191.45	191.45		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

From \ To	487N	487S	PARCM	55ON	55OFF
487N	0.000	662.200	80.100	251.800	0.000
487S	264.700	0.000	28.600	396.700	0.000
PARCM	295.800	149.000	0.000	153.000	0.000
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	199.000	23.300	32.000	0.000	0.000

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

From \ To	487N	487S	PARCM	55ON	55OFF
487N	0.00	0.67	0.08	0.25	0.00
487S	0.38	0.00	0.04	0.57	0.00
PARCM	0.49	0.25	0.00	0.26	0.00
55ON	0.20	0.20	0.20	0.20	0.20
55OFF	0.78	0.09	0.13	0.00	0.00

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

From \ To	487N	487S	PARCM	55ON	55OFF
487N	1.000	1.000	1.000	1.000	1.000
487S	1.000	1.000	1.000	1.000	1.000
PARCM	1.000	1.000	1.000	1.000	1.000
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.000	1.000	1.000	1.000	1.000

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

From \ To	487N	487S	PARCM	55ON	55OFF
487N	0.0	0.0	0.0	0.0	0.0
487S	0.0	0.0	0.0	0.0	0.0
PARCM	0.0	0.0	0.0	0.0	0.0
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.0	0.0	0.0	0.0	0.0

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
487N	0.73	8.90	2.66	4.00	A	912.20	1368.31	148.57	6.51	1.65	148.59	6.52
487S	0.48	4.40	0.92	~1	A	633.16	949.73	59.95	3.79	0.67	59.95	3.79
PARCM	0.90	43.65	7.44	29.00	E	548.55	822.83	285.17	20.79	3.17	285.22	20.80
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.35	6.87	0.53	1.00	A	233.35	350.03	34.88	5.98	0.39	34.88	5.98

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	748.41	187.10	744.61	568.02	152.45	0.00	1528.00	1388.14	0.490	0.00	0.95	4.574	A
487S	519.47	129.87	517.62	624.51	272.56	0.00	1640.84	1427.66	0.317	0.00	0.46	3.199	A
PARCM	450.06	112.51	445.58	105.41	684.77	0.00	843.66	448.95	0.533	0.00	1.12	8.947	A
55ON	Exit-only	Exit-only	Exit-only	600.24	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	191.45	47.86	190.36	0.00	530.11	0.00	888.41	664.15	0.216	0.00	0.27	5.150	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	893.68	223.42	891.81	680.52	182.71	0.00	1515.37	1388.14	0.590	0.95	1.42	5.756	A
487S	620.30	155.07	619.66	748.06	326.47	0.00	1614.02	1427.66	0.384	0.46	0.62	3.618	A
PARCM	537.41	134.35	533.92	126.26	819.87	0.00	795.73	448.95	0.675	1.12	1.99	13.568	B
55ON	Exit-only	Exit-only	Exit-only	718.80	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	228.61	57.15	228.25	0.00	634.99	0.00	852.77	664.15	0.268	0.27	0.36	5.760	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	1094.52	273.63	1089.75	826.33	220.30	0.00	1499.68	1388.14	0.730	1.42	2.61	8.680	A
487S	759.70	189.93	758.51	911.06	398.98	0.00	1577.96	1427.66	0.481	0.62	0.92	4.387	A
PARCM	658.19	164.55	640.14	154.40	1003.09	0.00	730.71	448.95	0.901	1.99	6.50	34.444	D
55ON	Exit-only	Exit-only	Exit-only	875.95	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	279.99	70.00	279.34	0.00	767.29	0.00	807.81	664.15	0.347	0.36	0.52	6.803	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	1094.52	273.63	1094.32	834.34	224.00	0.00	1498.14	1388.14	0.731	2.61	2.66	8.903	A
487S	759.70	189.93	759.68	917.73	400.59	0.00	1577.16	1427.66	0.482	0.92	0.92	4.403	A
PARCM	658.19	164.55	654.44	154.89	1005.38	0.00	729.90	448.95	0.902	6.50	7.44	43.649	E
55ON	Exit-only	Exit-only	Exit-only	881.44	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	279.99	70.00	279.97	0.00	778.37	0.00	804.04	664.15	0.348	0.52	0.53	6.868	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	893.68	223.42	898.46	694.11	189.03	0.00	1512.73	1388.14	0.591	2.66	1.47	5.904	A
487S	620.30	155.07	621.48	758.68	328.81	0.00	1612.86	1427.66	0.385	0.92	0.63	3.634	A
PARCM	537.41	134.35	558.41	127.00	823.29	0.00	794.51	448.95	0.676	7.44	2.19	16.465	C
55ON	Exit-only	Exit-only	Exit-only	727.80	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	228.61	57.15	229.24	0.00	653.91	0.00	846.34	664.15	0.270	0.53	0.37	5.841	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	748.41	187.10	750.39	574.36	154.91	0.00	1526.98	1388.14	0.490	1.47	0.97	4.647	A
487S	519.47	129.87	520.12	630.63	274.67	0.00	1639.79	1427.66	0.317	0.63	0.47	3.218	A
PARCM	450.06	112.51	454.13	106.16	688.63	0.00	842.29	448.95	0.534	2.19	1.17	9.368	A
55ON	Exit-only	Exit-only	Exit-only	605.33	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	191.45	47.86	191.83	0.00	537.43	0.00	885.92	664.15	0.216	0.37	0.28	5.191	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	13.77	0.92	4.574	A	A
487S	6.76	0.45	3.199	A	A
PARCM	15.81	1.05	8.947	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	3.98	0.27	5.150	A	A

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	20.52	1.37	5.756	A	A
487S	9.14	0.61	3.618	A	A
PARCM	27.77	1.85	13.568	B	B
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	5.33	0.36	5.760	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	36.72	2.45	8.680	A	A
487S	13.46	0.90	4.387	A	A
PARCM	77.51	5.17	34.444	D	C
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	7.65	0.51	6.803	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	39.63	2.64	8.903	A	A
487S	13.84	0.92	4.403	A	A
PARCM	105.65	7.04	43.649	E	D
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	7.93	0.53	6.868	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	22.95	1.53	5.904	A	A
487S	9.64	0.64	3.634	A	A
PARCM	39.89	2.66	16.465	C	B
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	5.74	0.38	5.841	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	14.99	1.00	4.647	A	A
487S	7.11	0.47	3.218	A	A
PARCM	18.55	1.24	9.368	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	4.25	0.28	5.191	A	A

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	0.95	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
487S	0.46	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
PARCM	1.12	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.27	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.42	0.00	0.00	3.00	4.00			N/A	N/A
487S	0.62	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
PARCM	1.99	0.00	0.00	4.00	6.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.36	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	2.61	0.00	0.00	0.00	4.00			N/A	N/A
487S	0.92	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
PARCM	6.50	0.00	0.00	16.00	25.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.52	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	2.66	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
487S	0.92	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
PARCM	7.44	0.00	0.00	15.00	29.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.53	0.00	0.00	0.00	1.00			N/A	N/A

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.47	0.00	0.00	3.00	4.00			N/A	N/A
487S	0.63	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
PARCM	2.19	0.00	0.00	4.00	7.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.37	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:30-17:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	0.97	0.00	0.00	1.00	2.00			N/A	N/A
487S	0.47	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
PARCM	1.17	0.00	0.00	1.00	3.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.28	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base, AM	2023 Base	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	487N,487S,PARCM,55ON,55OFF				45.66	E

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
487N	487N	(untitled)	
487S	487S	(untitled)	
PARCM	PARCM	(untitled)	
55ON	55ON	(untitled)	
55OFF	55OFF	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
487N	0.00	99999.00		0.00
487S	0.00	99999.00		0.00
PARCM	0.00	99999.00		0.00
55ON	0.00	99999.00		0.00
55OFF	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
487N	7.40	9.30	17.20	26.36	63.50	35.00	
487S	7.00	8.00	2.30	17.00	63.50	31.00	
PARCM	3.90	9.20	5.80	16.50	63.50	34.00	
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
55OFF	4.30	7.20	7.00	19.00	63.50	48.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
487N		(calculated)	(calculated)	0.696	2652.736
487S		(calculated)	(calculated)	0.622	2220.513
PARCM		(calculated)	(calculated)	0.507	1552.352
55ON		(calculated)	(calculated)	Exit-only	Exit-only
55OFF		(calculated)	(calculated)	0.500	1571.416

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
487N	Percentage			60.00
487S	Percentage			80.00
PARCM	Percentage			70.00
55ON	None			
55OFF	Percentage			68.00

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
487N	ONE HOUR	✓	1174.00	100.000
487S	ONE HOUR	✓	1236.00	100.000
PARCM	ONE HOUR	✓	159.00	100.000
55ON	Exit-only	✓	Exit-only	Exit-only
55OFF	ONE HOUR	✓	665.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	487N	883.85	883.85		
07:45-08:00	487S	930.53	930.53		
07:45-08:00	PARCM	119.70	119.70		
07:45-08:00	55ON	Exit-only	0.00		
07:45-08:00	55OFF	500.65	500.65		
08:00-08:15	487N	1055.40	1055.40		
08:00-08:15	487S	1111.14	1111.14		
08:00-08:15	PARCM	142.94	142.94		
08:00-08:15	55ON	Exit-only	0.00		
08:00-08:15	55OFF	597.82	597.82		
08:15-08:30	487N	1292.60	1292.60		
08:15-08:30	487S	1360.86	1360.86		
08:15-08:30	PARCM	175.06	175.06		
08:15-08:30	55ON	Exit-only	0.00		
08:15-08:30	55OFF	732.18	732.18		
08:30-08:45	487N	1292.60	1292.60		
08:30-08:45	487S	1360.86	1360.86		
08:30-08:45	PARCM	175.06	175.06		
08:30-08:45	55ON	Exit-only	0.00		
08:30-08:45	55OFF	732.18	732.18		
08:45-09:00	487N	1055.40	1055.40		
08:45-09:00	487S	1111.14	1111.14		
08:45-09:00	PARCM	142.94	142.94		
08:45-09:00	55ON	Exit-only	0.00		
08:45-09:00	55OFF	597.82	597.82		
09:00-09:15	487N	883.85	883.85		
09:00-09:15	487S	930.53	930.53		

09:00-09:15	PARCM	119.70	119.70		
09:00-09:15	55ON	Exit-only	0.00		
09:00-09:15	55OFF	500.65	500.65		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

From \ To	487N	487S	PARCM	55ON	55OFF
487N	0.000	620.000	368.000	186.000	0.000
487S	488.000	0.000	213.000	535.000	0.000
PARCM	76.000	46.000	0.000	37.000	0.000
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	362.000	58.000	245.000	0.000	0.000

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

From \ To	487N	487S	PARCM	55ON	55OFF
487N	0.00	0.53	0.31	0.16	0.00
487S	0.39	0.00	0.17	0.43	0.00
PARCM	0.48	0.29	0.00	0.23	0.00
55ON	0.20	0.20	0.20	0.20	0.20
55OFF	0.54	0.09	0.37	0.00	0.00

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

From \ To	487N	487S	PARCM	55ON	55OFF
487N	1.000	1.000	1.000	1.000	1.000
487S	1.000	1.000	1.000	1.000	1.000
PARCM	1.000	1.000	1.000	1.000	1.000
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.000	1.000	1.000	1.000	1.000

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

From \ To	487N	487S	PARCM	55ON	55OFF
487N	0.0	0.0	0.0	0.0	0.0
487S	0.0	0.0	0.0	0.0	0.0
PARCM	0.0	0.0	0.0	0.0	0.0
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.0	0.0	0.0	0.0	0.0

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
487N	0.90	24.23	8.20	30.00	C	1077.28	1615.92	337.20	12.52	3.75	337.25	12.52
487S	1.02	79.35	30.98	96.00	F	1134.18	1701.26	837.39	29.53	9.30	837.46	29.54
PARCM	0.28	7.96	0.38	–1	A	145.90	218.85	24.71	6.77	0.27	24.71	6.77
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.87	29.88	5.72	20.00	D	610.22	915.32	252.10	16.53	2.80	252.15	16.53

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	883.85	220.96	878.04	691.58	260.37	0.00	1482.96	1308.77	0.596	0.00	1.45	5.897	A
487S	930.53	232.63	923.87	541.37	597.04	0.00	1479.44	1282.53	0.629	0.00	1.66	6.406	A
PARCM	119.70	29.93	118.97	617.14	903.77	0.00	765.95	611.83	0.156	0.00	0.18	5.559	A
55ON	Exit-only	Exit-only	Exit-only	566.69	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	500.65	125.16	495.90	0.00	456.05	0.00	913.58	642.80	0.548	0.00	1.19	8.527	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	1055.40	263.85	1051.15	827.78	312.16	0.00	1461.34	1308.78	0.722	1.45	2.52	8.684	A
487S	1111.14	277.78	1104.19	648.25	715.06	0.00	1420.74	1282.53	0.782	1.66	3.40	11.129	B
PARCM	142.94	35.73	142.66	738.81	1080.44	0.00	703.27	611.83	0.203	0.18	0.25	6.419	A
55ON	Exit-only	Exit-only	Exit-only	677.68	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	597.82	149.46	594.52	0.00	545.42	0.00	883.21	642.80	0.677	1.19	2.01	12.325	B

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	1292.60	323.15	1272.89	985.62	378.32	0.00	1433.72	1308.78	0.902	2.52	7.44	20.272	C
487S	1360.86	340.22	1293.06	785.48	865.73	0.00	1345.80	1282.53	1.011	3.40	20.35	44.111	E
PARCM	175.06	43.77	174.57	886.89	1271.89	0.00	635.33	611.83	0.276	0.25	0.38	7.804	A
55ON	Exit-only	Exit-only	Exit-only	801.99	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	732.18	183.04	719.46	0.00	644.48	0.00	849.54	642.80	0.862	2.01	5.19	25.469	D

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	1292.60	323.15	1289.58	1001.58	383.28	0.00	1431.65	1308.78	0.903	7.44	8.20	24.227	C
487S	1360.86	340.22	1318.34	795.35	877.51	0.00	1339.94	1282.53	1.016	20.35	30.98	79.349	F
PARCM	175.06	43.77	175.03	900.39	1295.46	0.00	626.97	611.83	0.279	0.38	0.38	7.964	A
55ON	Exit-only	Exit-only	Exit-only	815.68	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	732.18	183.04	730.06	0.00	654.81	0.00	846.03	642.80	0.865	5.19	5.72	29.881	D

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	1055.40	263.85	1077.34	882.68	320.08	0.00	1458.03	1308.78	0.724	8.20	2.71	9.964	A
487S	1111.14	277.78	1219.02	663.76	733.66	0.00	1411.49	1282.53	0.787	30.98	4.01	27.519	D
PARCM	142.94	35.73	143.37	773.04	1179.63	0.00	668.07	611.83	0.214	0.38	0.27	6.866	A
55ON	Exit-only	Exit-only	Exit-only	731.70	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	597.82	149.46	611.45	0.00	591.31	0.00	867.61	642.80	0.689	5.72	2.32	14.729	B

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	883.85	220.96	888.69	703.23	264.80	0.00	1481.11	1308.77	0.597	2.71	1.50	6.127	A
487S	930.53	232.63	939.61	548.10	605.39	0.00	1475.29	1282.53	0.631	4.01	1.74	6.829	A
PARCM	119.70	29.93	120.05	626.52	918.49	0.00	760.73	611.83	0.157	0.27	0.19	5.623	A
55ON	Exit-only	Exit-only	Exit-only	575.44	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	500.65	125.16	504.94	0.00	463.09	0.00	911.18	642.80	0.549	2.32	1.24	8.953	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	20.73	1.38	5.897	A	A
487S	23.61	1.57	6.406	A	A
PARCM	2.68	0.18	5.559	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	16.78	1.12	8.527	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	35.49	2.37	8.684	A	A
487S	46.76	3.12	11.129	B	B
PARCM	3.71	0.25	6.419	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	28.23	1.88	12.325	B	B

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	92.60	6.17	20.272	C	C
487S	202.78	13.52	44.111	E	D
PARCM	5.48	0.37	7.804	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	65.61	4.37	25.469	D	C

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	118.31	7.89	24.227	C	C
487S	388.22	25.88	79.349	F	E
PARCM	5.72	0.38	7.964	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	82.63	5.51	29.881	D	C

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	46.51	3.10	9.964	A	A
487S	148.27	9.88	27.519	D	C
PARCM	4.23	0.28	6.866	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	39.16	2.61	14.729	B	B

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	23.58	1.57	6.127	A	A
487S	27.76	1.85	6.829	A	A
PARCM	2.89	0.19	5.623	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	19.69	1.31	8.953	A	A

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.45	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
487S	1.66	0.00	0.00	2.00	3.00			N/A	N/A
PARCM	0.18	–1	–1	–1	–1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.19	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (08:00-08:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	2.52	0.00	0.00	5.00	9.00			N/A	N/A
487S	3.40	0.00	0.00	8.00	12.00			N/A	N/A
PARCM	0.25	–1	–1	–1	–1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	2.01	0.00	0.00	4.00	6.00			N/A	N/A

Queue Variation results: (08:15-08:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	7.44	0.00	0.00	16.00	29.00			N/A	N/A
487S	20.35	0.00	13.00	47.00	62.00			N/A	N/A
PARCM	0.38	–1	–1	–1	–1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	5.19	0.00	0.00	11.00	20.00			N/A	N/A

Queue Variation results: (08:30-08:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	8.20	0.00	0.00	11.00	30.00			N/A	N/A
487S	30.98	0.00	19.00	73.00	96.00			N/A	N/A
PARCM	0.38	–1	–1	–1	–1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	5.72	0.00	0.00	7.00	20.00			N/A	N/A

Queue Variation results: (08:45-09:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	2.71	0.00	0.00	5.00	9.00			N/A	N/A
487S	4.01	0.00	0.00	8.00	15.00			N/A	N/A
PARCM	0.27	–1	–1	–1	–1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	2.32	0.00	0.00	5.00	8.00			N/A	N/A

Queue Variation results: (09:00-09:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.50	0.00	0.00	1.00	5.00			N/A	N/A
487S	1.74	0.00	0.00	0.00	4.00			N/A	N/A
PARCM	0.19	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.24	0.00	0.00	1.00	4.00			N/A	N/A

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base, PM	2023 Base	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	487N,487S,PARCM,55ON,55OFF				30.90	D

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
487N	487N	(untitled)	
487S	487S	(untitled)	
PARCM	PARCM	(untitled)	
55ON	55ON	(untitled)	
55OFF	55OFF	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
487N	0.00	99999.00		0.00
487S	0.00	99999.00		0.00
PARCM	0.00	99999.00		0.00
55ON	0.00	99999.00		0.00
55OFF	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
487N	7.40	9.30	17.20	26.36	63.50	35.00	
487S	7.00	8.00	2.30	17.00	63.50	31.00	
PARCM	3.90	9.20	5.80	16.50	63.50	34.00	
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
55OFF	4.30	7.20	7.00	19.00	63.50	48.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
487N		(calculated)	(calculated)	0.696	2652.736
487S		(calculated)	(calculated)	0.622	2220.513
PARCM		(calculated)	(calculated)	0.507	1552.352
55ON		(calculated)	(calculated)	Exit-only	Exit-only
55OFF		(calculated)	(calculated)	0.500	1571.416

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
487N	Percentage			60.00
487S	Percentage			80.00
PARCM	Percentage			70.00
55ON	None			
55OFF	Percentage			68.00

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
487N	ONE HOUR	✓	1124.00	100.000
487S	ONE HOUR	✓	760.00	100.000
PARCM	ONE HOUR	✓	638.00	100.000
55ON	Exit-only	✓	Exit-only	Exit-only
55OFF	ONE HOUR	✓	283.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	487N	846.21	846.21		
16:15-16:30	487S	572.17	572.17		
16:15-16:30	PARCM	480.32	480.32		
16:15-16:30	55ON	Exit-only	0.00		
16:15-16:30	55OFF	213.06	213.06		
16:30-16:45	487N	1010.45	1010.45		
16:30-16:45	487S	683.22	683.22		
16:30-16:45	PARCM	573.55	573.55		
16:30-16:45	55ON	Exit-only	0.00		
16:30-16:45	55OFF	254.41	254.41		
16:45-17:00	487N	1237.55	1237.55		
16:45-17:00	487S	836.78	836.78		
16:45-17:00	PARCM	702.45	702.45		
16:45-17:00	55ON	Exit-only	0.00		

16:45-17:00	55OFF	311.59	311.59		
17:00-17:15	487N	1237.55	1237.55		
17:00-17:15	487S	836.78	836.78		
17:00-17:15	PARCM	702.45	702.45		
17:00-17:15	55ON	Exit-only	0.00		
17:00-17:15	55OFF	311.59	311.59		
17:15-17:30	487N	1010.45	1010.45		
17:15-17:30	487S	683.22	683.22		
17:15-17:30	PARCM	573.55	573.55		
17:15-17:30	55ON	Exit-only	0.00		
17:15-17:30	55OFF	254.41	254.41		
17:30-17:45	487N	846.21	846.21		
17:30-17:45	487S	572.17	572.17		
17:30-17:45	PARCM	480.32	480.32		
17:30-17:45	55ON	Exit-only	0.00		
17:30-17:45	55OFF	213.06	213.06		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To				
		487N	487S	PARCM	55ON	55OFF
From	487N	0.000	769.000	86.000	269.000	0.000
	487S	294.000	0.000	31.000	435.000	0.000
	PARCM	316.000	159.000	0.000	163.000	0.000
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	213.000	36.000	34.000	0.000	0.000

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To				
		487N	487S	PARCM	55ON	55OFF
From	487N	0.00	0.68	0.08	0.24	0.00
	487S	0.39	0.00	0.04	0.57	0.00
	PARCM	0.50	0.25	0.00	0.26	0.00
	55ON	0.20	0.20	0.20	0.20	0.20
	55OFF	0.75	0.13	0.12	0.00	0.00

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To				
		487N	487S	PARCM	55ON	55OFF
From	487N	1.000	1.000	1.000	1.000	1.000
	487S	1.000	1.000	1.000	1.000	1.000
	PARCM	1.000	1.000	1.000	1.000	1.000
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	1.000	1.000	1.000	1.000	1.000

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To				
		487N	487S	PARCM	55ON	55OFF
From	487N	0.0	0.0	0.0	0.0	0.0
	487S	0.0	0.0	0.0	0.0	0.0
	PARCM	0.0	0.0	0.0	0.0	0.0
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	0.0	0.0	0.0	0.0	0.0

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
487N	0.83	14.16	4.70	15.00	B	1031.40	1547.10	229.90	8.92	2.55	229.93	8.92
487S	0.54	4.95	1.14	?	A	697.39	1046.08	72.20	4.14	0.80	72.20	4.14
PARCM	1.01	101.64	19.85	64.00	F	585.44	878.16	577.27	39.44	6.41	577.35	39.45
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.40	7.57	0.65	1.00	A	259.69	389.53	42.07	6.48	0.47	42.08	6.48

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	846.21	211.55	841.25	615.09	170.72	0.00	1520.38	1381.28	0.557	0.00	1.24	5.264	A
487S	572.17	143.04	570.02	720.83	291.14	0.00	1631.60	1444.28	0.351	0.00	0.54	3.383	A
PARCM	480.32	120.08	474.84	113.06	748.10	0.00	821.19	450.79	0.585	0.00	1.37	10.240	B
55ON	Exit-only	Exit-only	Exit-only	648.91	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	213.06	53.26	211.78	0.00	574.03	0.00	873.48	661.29	0.244	0.00	0.32	5.431	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	1010.45	252.61	1007.44	736.50	204.39	0.00	1506.32	1381.28	0.671	1.24	1.99	7.171	A
487S	683.22	170.81	682.42	863.14	348.70	0.00	1602.97	1444.28	0.426	0.54	0.74	3.907	A
PARCM	573.55	143.39	568.09	135.43	895.69	0.00	768.82	450.79	0.746	1.37	2.74	17.464	C
55ON	Exit-only	Exit-only	Exit-only	776.84	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	254.41	63.60	253.96	0.00	686.94	0.00	835.11	661.29	0.305	0.32	0.43	6.189	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	1237.55	309.39	1227.50	883.19	241.00	0.00	1491.04	1381.28	0.830	1.99	4.50	13.177	B
487S	836.78	209.19	835.18	1043.48	425.02	0.00	1565.00	1444.28	0.535	0.74	1.14	4.921	A
PARCM	702.45	175.61	658.61	165.32	1094.88	0.00	698.14	450.79	1.006	2.74	13.70	60.446	F
55ON	Exit-only	Exit-only	Exit-only	940.07	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	311.59	77.90	310.76	0.00	813.43	0.00	792.12	661.29	0.393	0.43	0.64	7.467	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	1237.55	309.39	1236.75	893.91	245.99	0.00	1488.96	1381.28	0.831	4.50	4.70	14.161	B
487S	836.78	209.19	836.74	1054.70	428.04	0.00	1563.50	1444.28	0.535	1.14	1.14	4.953	A
PARCM	702.45	175.61	677.85	166.19	1098.60	0.00	696.82	450.79	1.008	13.70	19.85	101.635	F
55ON	Exit-only	Exit-only	Exit-only	948.09	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	311.59	77.90	311.55	0.00	828.35	0.00	787.05	661.29	0.396	0.64	0.65	7.570	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	1010.45	252.61	1020.78	773.87	222.57	0.00	1498.73	1381.28	0.674	4.70	2.12	7.689	A
487S	683.22	170.81	684.80	890.30	353.06	0.00	1600.80	1444.28	0.427	1.14	0.75	3.936	A
PARCM	573.55	143.39	639.82	136.69	901.17	0.00	766.88	450.79	0.748	19.85	3.28	38.825	E
55ON	Exit-only	Exit-only	Exit-only	799.72	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	254.41	63.60	255.18	0.00	741.27	0.00	816.65	661.29	0.312	0.65	0.46	6.419	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	846.21	211.55	849.59	623.92	174.35	0.00	1518.86	1381.28	0.557	2.12	1.27	5.405	A
487S	572.17	143.04	572.99	729.95	293.99	0.00	1630.18	1444.28	0.351	0.75	0.54	3.409	A
PARCM	480.32	120.08	487.61	114.04	752.95	0.00	819.47	450.79	0.586	3.28	1.46	11.073	B
55ON	Exit-only	Exit-only	Exit-only	655.87	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	213.06	53.26	213.58	0.00	584.69	0.00	869.86	661.29	0.245	0.46	0.33	5.491	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	17.81	1.19	5.264	A	A
487S	7.87	0.52	3.383	A	A
PARCM	19.15	1.28	10.240	B	B
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	4.66	0.31	5.431	A	A

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	28.48	1.90	7.171	A	A
487S	10.84	0.72	3.907	A	A
PARCM	37.13	2.48	17.464	C	B
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	6.35	0.42	6.189	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	60.39	4.03	13.177	B	B
487S	16.54	1.10	4.921	A	A
PARCM	139.33	9.29	60.446	F	E
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	9.30	0.62	7.467	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	69.36	4.62	14.161	B	B
487S	17.12	1.14	4.953	A	A
PARCM	253.82	16.92	101.635	F	F
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	9.69	0.65	7.570	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	34.03	2.27	7.689	A	A
487S	11.53	0.77	3.936	A	A
PARCM	104.30	6.95	38.825	E	D
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	7.06	0.47	6.419	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	19.84	1.32	5.405	A	A
487S	8.31	0.55	3.409	A	A
PARCM	23.54	1.57	11.073	B	B
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	5.02	0.33	5.491	A	A

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.24	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
487S	0.54	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
PARCM	1.37	0.00	0.00	1.00	2.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		[illegible]	[illegible]

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.99	0.00	0.00	4.00	6.00			N/A	N/A
487S	0.74	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
PARCM	2.74	0.00	0.00	6.00	9.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.43	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	4.50	0.00	0.00	5.00	15.00			N/A	N/A
487S	1.14	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
PARCM	13.70	0.00	8.00	31.00	41.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.64	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	4.70	0.00	0.00	0.00	9.00			N/A	N/A
487S	1.14	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
PARCM	19.85	0.00	11.00	48.00	64.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.65	0.00	0.00	0.00	1.00			N/A	N/A

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	2.12	0.00	0.00	4.00	7.00			N/A	N/A
487S	0.75	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
PARCM	3.28	0.00	0.00	6.00	12.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.46	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (17:30-17:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.27	0.00	0.00	2.00	4.00			N/A	N/A
487S	0.54	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
PARCM	1.46	0.00	0.00	0.00	3.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.33	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base + Dev, AM	2023 Base + Dev	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	487N,487S,PARCM,55ON,55OFF				149.57	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
487N	487N	(untitled)	
487S	487S	(untitled)	
PARCM	PARCM	(untitled)	
55ON	55ON	(untitled)	
55OFF	55OFF	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
487N	0.00	99999.00		0.00
487S	0.00	99999.00		0.00
PARCM	0.00	99999.00		0.00
55ON	0.00	99999.00		0.00
55OFF	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
487N	7.40	9.30	17.20	26.36	63.50	35.00	
487S	7.00	8.00	2.30	17.00	63.50	31.00	
PARCM	3.90	9.20	5.80	16.50	63.50	34.00	
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
55OFF	4.30	7.20	7.00	19.00	63.50	48.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
487N		(calculated)	(calculated)	0.696	2652.736
487S		(calculated)	(calculated)	0.622	2220.513
PARCM		(calculated)	(calculated)	0.507	1552.352
55ON		(calculated)	(calculated)	Exit-only	Exit-only
55OFF		(calculated)	(calculated)	0.500	1571.416

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
487N	Percentage			60.00
487S	Percentage			80.00
PARCM	Percentage			70.00
55ON	None			
55OFF	Percentage			68.00

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
487N	ONE HOUR	✓	1174.00	100.000
487S	ONE HOUR	✓	1395.00	100.000
PARCM	ONE HOUR	✓	159.00	100.000
55ON	Exit-only	✓	Exit-only	Exit-only
55OFF	ONE HOUR	✓	824.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	487N	883.85	883.85		
07:45-08:00	487S	1050.23	1050.23		
07:45-08:00	PARCM	119.70	119.70		
07:45-08:00	55ON	Exit-only	0.00		
07:45-08:00	55OFF	620.35	620.35		
08:00-08:15	487N	1055.40	1055.40		
08:00-08:15	487S	1254.08	1254.08		
08:00-08:15	PARCM	142.94	142.94		
08:00-08:15	55ON	Exit-only	0.00		
08:00-08:15	55OFF	740.76	740.76		
08:15-08:30	487N	1292.60	1292.60		
08:15-08:30	487S	1535.92	1535.92		
08:15-08:30	PARCM	175.06	175.06		
08:15-08:30	55ON	Exit-only	0.00		
08:15-08:30	55OFF	907.24	907.24		
08:30-08:45	487N	1292.60	1292.60		
08:30-08:45	487S	1535.92	1535.92		
08:30-08:45	PARCM	175.06	175.06		
08:30-08:45	55ON	Exit-only	0.00		
08:30-08:45	55OFF	907.24	907.24		
08:45-09:00	487N	1055.40	1055.40		
08:45-09:00	487S	1254.08	1254.08		
08:45-09:00	PARCM	142.94	142.94		
08:45-09:00	55ON	Exit-only	0.00		
08:45-09:00	55OFF	740.76	740.76		
09:00-09:15	487N	883.85	883.85		

09:00-09:15	487S	1050.23	1050.23		
09:00-09:15	PARCM	119.70	119.70		
09:00-09:15	55ON	Exit-only	0.00		
09:00-09:15	55OFF	620.35	620.35		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To				
		487N	487S	PARCM	55ON	55OFF
From	487N	0.000	620.000	368.000	186.000	0.000
	487S	648.000	0.000	212.000	535.000	0.000
	PARCM	76.000	46.000	0.000	37.000	0.000
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	361.000	218.000	245.000	0.000	0.000

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To				
		487N	487S	PARCM	55ON	55OFF
From	487N	0.00	0.53	0.31	0.16	0.00
	487S	0.46	0.00	0.15	0.38	0.00
	PARCM	0.48	0.29	0.00	0.23	0.00
	55ON	0.20	0.20	0.20	0.20	0.20
	55OFF	0.44	0.26	0.30	0.00	0.00

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To				
		487N	487S	PARCM	55ON	55OFF
From	487N	1.000	1.000	1.000	1.000	1.000
	487S	1.000	1.000	1.000	1.000	1.000
	PARCM	1.000	1.000	1.000	1.000	1.000
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	1.000	1.000	1.000	1.000	1.000

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To				
		487N	487S	PARCM	55ON	55OFF
From	487N	0.0	0.0	0.0	0.0	0.0
	487S	0.0	0.0	0.0	0.0	0.0
	PARCM	0.0	0.0	0.0	0.0	0.0
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	0.0	0.0	0.0	0.0	0.0

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
487N	0.94	33.84	11.38	46.00	D	1077.28	1615.92	428.45	15.91	4.76	428.51	15.91
487S	1.13	213.58	99.00	164.00	F	1280.08	1920.11	3301.84	103.18	36.69	3302.00	103.18
PARCM	0.29	8.33	0.40	~1	A	145.90	218.85	27.02	7.41	0.30	27.02	7.41
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.12	233.33	58.72	108.00	F	756.12	1134.18	2191.08	115.91	24.35	2191.55	115.94

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	883.85	220.96	877.54	807.98	377.74	0.00	1433.96	1296.98	0.616	0.00	1.58	6.400	A
487S	1050.23	262.56	1040.75	659.50	595.78	0.00	1480.07	1318.89	0.710	0.00	2.37	8.031	A
PARCM	119.70	29.93	118.92	614.91	1021.62	0.00	724.14	595.05	0.165	0.00	0.20	5.941	A
55ON	Exit-only	Exit-only	Exit-only	565.85	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	620.35	155.09	611.03	0.00	574.69	0.00	873.26	621.62	0.710	0.00	2.33	13.299	B

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	1055.40	263.85	1050.11	961.24	449.07	0.00	1404.19	1296.98	0.752	1.58	2.90	10.016	B
487S	1254.08	313.52	1238.08	787.84	711.33	0.00	1422.59	1318.89	0.882	2.37	6.37	18.107	C
PARCM	142.94	35.73	142.62	733.11	1216.30	0.00	655.06	595.05	0.218	0.20	0.28	7.020	A
55ON	Exit-only	Exit-only	Exit-only	674.38	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	740.76	185.19	725.77	0.00	684.54	0.00	835.93	621.62	0.886	2.33	6.08	29.286	D

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	1292.60	323.15	1265.10	1058.84	498.50	0.00	1383.56	1296.98	0.934	2.90	9.77	25.853	D
487S	1535.92	383.98	1347.85	929.55	834.05	0.00	1361.56	1318.88	1.128	6.37	53.39	90.341	F
PARCM	175.06	43.77	174.58	838.45	1343.45	0.00	609.94	595.05	0.287	0.28	0.40	8.260	A
55ON	Exit-only	Exit-only	Exit-only	757.98	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	907.24	226.81	797.29	0.00	760.05	0.00	810.26	621.62	1.120	6.08	33.57	104.463	F

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	1292.60	323.15	1286.18	1065.76	503.87	0.00	1381.31	1296.98	0.936	9.77	11.38	33.838	D
487S	1535.92	383.98	1353.48	943.28	846.77	0.00	1355.23	1318.88	1.133	53.39	99.00	208.933	F
PARCM	175.06	43.77	175.04	848.68	1351.56	0.00	607.06	595.05	0.288	0.40	0.40	8.333	A
55ON	Exit-only	Exit-only	Exit-only	763.58	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	907.24	226.81	806.61	0.00	763.02	0.00	809.25	621.62	1.121	33.57	58.72	217.338	F

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	1055.40	263.85	1087.55	1063.48	490.03	0.00	1387.09	1296.98	0.761	11.38	3.34	13.175	B
487S	1254.08	313.52	1389.05	827.01	750.57	0.00	1403.08	1318.89	0.894	99.00	65.25	213.584	F
PARCM	142.94	35.73	143.30	789.36	1350.25	0.00	607.53	595.05	0.235	0.40	0.31	7.762	A
55ON	Exit-only	Exit-only	Exit-only	738.37	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	740.76	185.19	798.32	0.00	755.19	0.00	811.92	621.62	0.912	58.72	44.33	233.326	F

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	883.85	220.96	890.14	1004.34	474.83	0.00	1393.44	1296.98	0.634	3.34	1.77	7.241	A
487S	1050.23	262.56	1299.90	712.03	652.93	0.00	1451.64	1318.89	0.723	65.25	2.84	58.840	F
PARCM	119.70	29.93	120.03	709.45	1243.38	0.00	645.45	595.05	0.185	0.31	0.23	6.855	A
55ON	Exit-only	Exit-only	Exit-only	667.49	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	620.35	155.09	783.25	0.00	695.92	0.00	832.06	621.62	0.746	44.33	3.61	100.928	F

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	22.42	1.49	6.400	A	A
487S	32.96	2.20	8.031	A	A
PARCM	2.86	0.19	5.941	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	31.49	2.10	13.299	B	B

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	40.44	2.70	10.016	B	B
487S	81.27	5.42	18.107	C	B
PARCM	4.04	0.27	7.020	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	75.12	5.01	29.286	D	C

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	115.42	7.69	25.853	D	C
487S	460.38	30.69	90.341	F	F
PARCM	5.79	0.39	8.260	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	306.41	20.43	104.463	F	F

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	160.39	10.69	33.838	D	C
487S	1143.48	76.23	208.933	F	F
PARCM	6.01	0.40	8.333	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	692.94	46.20	217.338	F	F

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	61.79	4.12	13.175	B	B
487S	1231.89	82.13	213.584	F	F
PARCM	4.79	0.32	7.762	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	772.92	51.53	233.326	F	F

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	27.99	1.87	7.241	A	A
487S	351.85	23.46	58.840	F	E
PARCM	3.53	0.24	6.855	A	A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	312.21	20.81	100.928	F	F

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.58	0.00	0.00	1.00	2.00			N/A	N/A
487S	2.37	0.00	1.00	5.00	6.00			N/A	N/A
PARCM	0.20	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	2.33	0.00	1.00	4.00	5.00			N/A	N/A

Queue Variation results: (08:00-08:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	2.90	0.00	0.00	6.00	10.00			N/A	N/A
487S	6.37	0.00	1.00	16.00	23.00			N/A	N/A
PARCM	0.28	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	6.08	0.00	2.00	14.00	20.00			N/A	N/A

Queue Variation results: (08:15-08:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	9.77	0.00	0.00	25.00	39.00			N/A	N/A
487S	53.39	20.00	49.00	85.00	97.00			N/A	N/A
PARCM	0.40	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	33.57	9.00	29.00	57.00	67.00			N/A	N/A

Queue Variation results: (08:30-08:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	11.38	0.00	0.00	25.00	46.00			N/A	N/A
487S	99.00	47.00	94.00	147.00	164.00			N/A	N/A
PARCM	0.40	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	58.72	21.00	54.00	94.00	108.00			N/A	N/A

Queue Variation results: (08:45-09:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	3.34	0.00	0.00	7.00	12.00			N/A	N/A
487S	65.25	35.00	62.00	91.00	100.00			N/A	N/A
PARCM	0.31	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	44.33	16.00	40.00	70.00	80.00			N/A	N/A

Queue Variation results: (09:00-09:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.77	0.00	0.00	2.00	5.00			N/A	N/A
487S	2.84	0.00	0.00	0.00	6.00			N/A	N/A
PARCM	0.23	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	3.61	0.00	0.00	4.00	12.00			N/A	N/A

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base + Dev, PM	2023 Base + Dev	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	487N,487S,PARCM,55ON,55OFF				51.84	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
487N	487N	(untitled)	
487S	487S	(untitled)	
PARCM	PARCM	(untitled)	
55ON	55ON	(untitled)	
55OFF	55OFF	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
487N	0.00	99999.00		0.00
487S	0.00	99999.00		0.00
PARCM	0.00	99999.00		0.00
55ON	0.00	99999.00		0.00
55OFF	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
487N	7.40	9.30	17.20	26.36	63.50	35.00	
487S	7.00	8.00	2.30	17.00	63.50	31.00	
PARCM	3.90	9.20	5.80	16.50	63.50	34.00	
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	✓
55OFF	4.30	7.20	7.00	19.00	63.50	48.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
487N		(calculated)	(calculated)	0.696	2652.736
487S		(calculated)	(calculated)	0.622	2220.513
PARCM		(calculated)	(calculated)	0.507	1552.352
55ON		(calculated)	(calculated)	Exit-only	Exit-only
55OFF		(calculated)	(calculated)	0.500	1571.416

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
487N	Percentage			60.00
487S	Percentage			80.00
PARCM	Percentage			70.00
55ON	None			
55OFF	Percentage			68.00

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
487N	ONE HOUR	✓	1124.00	100.000
487S	ONE HOUR	✓	920.00	100.000
PARCM	ONE HOUR	✓	638.00	100.000
55ON	Exit-only	✓	Exit-only	Exit-only
55OFF	ONE HOUR	✓	443.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	487N	846.21	846.21		
16:15-16:30	487S	692.62	692.62		
16:15-16:30	PARCM	480.32	480.32		
16:15-16:30	55ON	Exit-only	0.00		
16:15-16:30	55OFF	333.51	333.51		
16:30-16:45	487N	1010.45	1010.45		
16:30-16:45	487S	827.06	827.06		
16:30-16:45	PARCM	573.55	573.55		
16:30-16:45	55ON	Exit-only	0.00		
16:30-16:45	55OFF	398.25	398.25		
16:45-17:00	487N	1237.55	1237.55		
16:45-17:00	487S	1012.94	1012.94		
16:45-17:00	PARCM	702.45	702.45		
16:45-17:00	55ON	Exit-only	0.00		

16:45-17:00	55OFF	487.75	487.75		
17:00-17:15	487N	1237.55	1237.55		
17:00-17:15	487S	1012.94	1012.94		
17:00-17:15	PARCM	702.45	702.45		
17:00-17:15	55ON	Exit-only	0.00		
17:00-17:15	55OFF	487.75	487.75		
17:15-17:30	487N	1010.45	1010.45		
17:15-17:30	487S	827.06	827.06		
17:15-17:30	PARCM	573.55	573.55		
17:15-17:30	55ON	Exit-only	0.00		
17:15-17:30	55OFF	398.25	398.25		
17:30-17:45	487N	846.21	846.21		
17:30-17:45	487S	692.62	692.62		
17:30-17:45	PARCM	480.32	480.32		
17:30-17:45	55ON	Exit-only	0.00		
17:30-17:45	55OFF	333.51	333.51		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To				
		487N	487S	PARCM	55ON	55OFF
From	487N	0.000	769.000	86.000	269.000	0.000
	487S	454.000	0.000	31.000	435.000	0.000
	PARCM	316.000	159.000	0.000	163.000	0.000
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	213.000	196.000	34.000	0.000	0.000

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Turning Proportions (PCU) - Junction 1 (for whole period)

		To				
		487N	487S	PARCM	55ON	55OFF
From	487N	0.00	0.68	0.08	0.24	0.00
	487S	0.49	0.00	0.03	0.47	0.00
	PARCM	0.50	0.25	0.00	0.26	0.00
	55ON	0.20	0.20	0.20	0.20	0.20
	55OFF	0.48	0.44	0.08	0.00	0.00

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To				
		487N	487S	PARCM	55ON	55OFF
From	487N	1.000	1.000	1.000	1.000	1.000
	487S	1.000	1.000	1.000	1.000	1.000
	PARCM	1.000	1.000	1.000	1.000	1.000
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	1.000	1.000	1.000	1.000	1.000

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To				
		487N	487S	PARCM	55ON	55OFF
From	487N	0.0	0.0	0.0	0.0	0.0
	487S	0.0	0.0	0.0	0.0	0.0
	PARCM	0.0	0.0	0.0	0.0	0.0
	55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	55OFF	0.0	0.0	0.0	0.0	0.0

Arm 55ON is exit only and so the above grid should be ignored for this Arm.

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
487N	0.87	19.12	6.26	22.00	C	1031.40	1547.10	280.74	10.89	3.12	280.78	10.89
487S	0.65	6.53	1.82	2.00	A	844.21	1266.31	107.20	5.08	1.19	107.21	5.08
PARCM	1.11	200.88	42.30	85.00	F	585.44	878.16	1228.30	83.92	13.65	1228.41	83.93
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.66	14.28	1.89	3.00	B	406.50	609.76	106.56	10.49	1.18	106.57	10.49

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	846.21	211.55	840.87	734.26	289.94	0.00	1470.61	1332.58	0.575	0.00	1.34	5.670	A
487S	692.62	173.16	689.70	839.83	290.97	0.00	1631.68	1481.45	0.424	0.00	0.73	3.811	A
PARCM	480.32	120.08	474.10	112.97	867.69	0.00	778.76	443.47	0.617	0.00	1.56	11.595	B
55ON	Exit-only	Exit-only	Exit-only	648.47	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	333.51	83.38	330.88	0.00	693.32	0.00	832.94	623.43	0.400	0.00	0.66	7.134	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	1010.45	252.61	1006.79	878.46	347.00	0.00	1446.79	1332.58	0.698	1.34	2.25	8.113	A
487S	827.06	206.77	825.77	1005.36	348.44	0.00	1603.10	1481.45	0.516	0.73	1.05	4.624	A
PARCM	573.55	143.39	565.60	135.32	1038.89	0.00	718.01	443.47	0.799	1.56	3.54	22.510	C
55ON	Exit-only	Exit-only	Exit-only	775.90	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	398.25	99.56	396.87	0.00	828.60	0.00	786.97	623.43	0.506	0.66	1.00	9.195	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	1237.55	309.39	1223.11	1038.04	405.84	0.00	1422.23	1332.58	0.870	2.25	5.86	16.958	C
487S	1012.94	253.23	1009.97	1205.47	423.48	0.00	1565.77	1481.45	0.647	1.05	1.80	6.442	A
PARCM	702.45	175.61	619.27	164.79	1268.66	0.00	636.48	443.47	1.104	3.54	24.34	98.287	F
55ON	Exit-only	Exit-only	Exit-only	928.47	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	487.75	121.94	484.43	0.00	959.45	0.00	742.50	623.43	0.657	1.00	1.84	13.772	B

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	1237.55	309.39	1235.94	1046.57	410.28	0.00	1420.38	1332.58	0.871	5.86	6.26	19.118	C
487S	1012.94	253.23	1012.85	1218.44	427.77	0.00	1563.64	1481.45	0.648	1.80	1.82	6.533	A
PARCM	702.45	175.61	630.61	166.11	1274.51	0.00	634.40	443.47	1.107	24.34	42.30	200.879	F
55ON	Exit-only	Exit-only	Exit-only	935.80	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	487.75	121.94	487.53	0.00	969.32	0.00	739.15	623.43	0.660	1.84	1.89	14.277	B

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	1010.45	252.61	1025.62	948.44	382.37	0.00	1432.03	1332.58	0.706	6.26	2.47	9.169	A
487S	827.06	206.77	830.01	1053.27	354.72	0.00	1599.97	1481.45	0.517	1.82	1.08	4.694	A
PARCM	573.55	143.39	698.44	137.23	1047.50	0.00	714.95	443.47	0.802	42.30	11.08	144.439	F
55ON	Exit-only	Exit-only	Exit-only	816.35	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	398.25	99.56	401.22	0.00	929.59	0.00	752.65	623.43	0.529	1.89	1.15	10.328	B

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
487N	846.21	211.55	850.54	760.20	303.17	0.00	1465.09	1332.58	0.578	2.47	1.39	5.900	A
487S	692.62	173.16	693.97	859.34	294.37	0.00	1629.99	1481.45	0.425	1.08	0.74	3.851	A
PARCM	480.32	120.08	517.88	114.20	874.14	0.00	776.47	443.47	0.619	11.08	1.68	15.865	C
55ON	Exit-only	Exit-only	Exit-only	664.00	Exit-only	0.00	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	333.51	83.38	335.34	0.00	728.03	0.00	821.15	623.43	0.406	1.15	0.69	7.436	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	19.12	1.27	5.670	A	A
487S	10.68	0.71	3.811	A	A
PARCM	21.52	1.43	11.595	B	B
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	9.46	0.63	7.134	A	A

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	31.94	2.13	8.113	A	A
487S	15.41	1.03	4.624	A	A
PARCM	46.52	3.10	22.510	C	C
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	14.45	0.96	9.195	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	75.68	5.05	16.958	C	B
487S	25.78	1.72	6.442	A	A
PARCM	221.04	14.74	98.287	F	F
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	25.60	1.71	13.772	B	B

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	91.51	6.10	19.118	C	B
487S	27.16	1.81	6.533	A	A
PARCM	500.82	33.39	200.879	F	F
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	28.06	1.87	14.277	B	B

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	40.79	2.72	9.169	A	A
487S	16.75	1.12	4.694	A	A
PARCM	400.31	26.69	144.439	F	F
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	18.18	1.21	10.328	B	B

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
487N	21.70	1.45	5.900	A	A
487S	11.42	0.76	3.851	A	A
PARCM	38.09	2.54	15.865	C	B
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	10.80	0.72	7.436	A	A

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.34	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
487S	0.73	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
PARCM	1.56	0.00	0.00	2.00	3.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.66	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	2.25	0.00	0.00	5.00	7.00			N/A	N/A
487S	1.05	0.00	0.00	1.00	2.00			N/A	N/A
PARCM	3.54	0.00	0.00	8.00	12.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.00	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A

Generated on 14/06/2018 16:24:19 using Junctions 8 (8.0.6.541)

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	5.86	0.00	0.00	10.00	22.00			N/A	N/A
487S	1.80	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
PARCM	24.34	5.00	20.00	44.00	52.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.84	0.00	0.00	0.00	3.00			N/A	N/A

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	6.26	0.00	0.00	4.00	19.00			N/A	N/A
487S	1.82	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
PARCM	42.30	12.00	37.00	72.00	85.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.89	0.00	0.00	0.00	2.00			N/A	N/A

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	2.47	0.00	0.00	5.00	8.00			N/A	N/A
487S	1.08	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
PARCM	11.08	0.00	6.00	26.00	35.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	1.15	0.00	0.00	2.00	2.00			N/A	N/A

Queue Variation results: (17:30-17:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
487N	1.39	0.00	0.00	2.00	4.00			N/A	N/A
487S	0.74	0.00	0.00	1.00	1.00			N/A	N/A
PARCM	1.68	0.00	0.00	0.00	3.00			N/A	N/A
55ON	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
55OFF	0.69	0.00	0.00	1.00	1.00			N/A	N/A

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: B4547_NANTyGARTH_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\B4547 Nant y Garth
Report generation date: 14/06/2018 16:34:13

- » (Default Analysis Set) - 2017 Base, AM
- » (Default Analysis Set) - 2017 Base, PM
- » (Default Analysis Set) - 2023 Base, AM
- » (Default Analysis Set) - 2023 Base, PM
- » (Default Analysis Set) - 2023 Base + Dev, AM
- » (Default Analysis Set) - 2023 Base + Dev, PM
- » (Default Analysis Set) - 2023 Secondary Base + Dev, PM

Generated on 14/06/2018 16:34:28 using Junctions 8 (8.0.6.541)

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2017 Base							
Stream B-C	2.11	381.91	1.01	F	0.05	8.05	0.05	A
Stream B-A	15.26	111.72	1.00	F	1.03	15.25	0.51	C
Stream C-AB	0.03	5.60	0.03	A	0.04	6.42	0.04	A
Stream C-A	-	-	-	-	-	-	-	-
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
	A1 - 2023 Base							
Stream B-C	2.64	516.61	1.10	F	0.05	8.47	0.05	A
Stream B-A	29.79	191.32	1.08	F	1.21	16.92	0.55	C
Stream C-AB	0.04	5.64	0.03	A	0.04	6.53	0.04	A
Stream C-A	-	-	-	-	-	-	-	-
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
	A1 - 2023 Base + Dev							
Stream B-C	5.77	1404.22	1.30	F	1.99	279.52	0.94	F
Stream B-A	162.28	1106.23	1.46	F	9.96	86.76	0.95	F
Stream C-AB	0.04	5.95	0.04	A	0.05	6.95	0.05	A
Stream C-A	-	-	-	-	-	-	-	-
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
	A1 - 2023 Secondary Base + Dev							
Stream B-C					0.09	13.46	0.08	B
Stream B-A					3.02	31.85	0.76	D
Stream C-AB					0.05	6.75	0.04	A
Stream C-A					-	-	-	-
Stream A-B					-	-	-	-
Stream A-C					-	-	-	-

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:30 - 18:00
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:30 - 18:00
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:30 - 18:00
"D12 - 2023 Secondary Base + Dev, PM" model duration: 16:30 - 18:00

Run using Junctions 8.0.6.541 at 14/06/2018 16:34:08

File summary

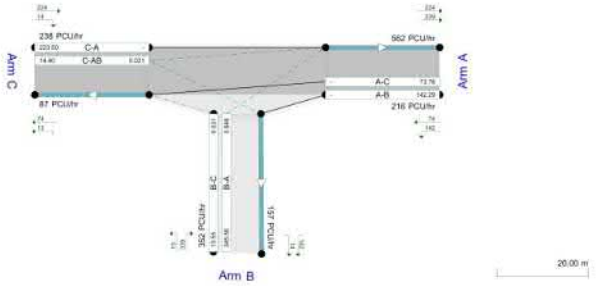
Title	(untitled)
Location	
Site Number	
Date	14/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, AM	2017 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	B4547 NANT Y GARTH	T-Junction	Two-way	A,B,C	117.41	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	4547E		Major
B	B	4547S		Minor
C	C	4547W		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	13.10		0.00		2.20	250.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.70	5.80	4.10	3.60	✓	2.00	42	36

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	587.388	0.074	0.187	0.118	0.267
1	B-C	657.389	0.070	0.176	-	-
1	C-B	718.741	0.192	0.192	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	287.00	100.000
B	ONE HOUR	✓	477.00	100.000
C	ONE HOUR	✓	316.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	189.000	98.000
	B	459.000	0.000	18.000
	C	297.000	19.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.66	0.34
	B	0.96	0.00	0.04
	C	0.94	0.06	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	1.01	381.91	2.11	7.00	F
B-A	1.00	111.72	15.26	52.00	F
C-AB	0.03	5.60	0.03	−1	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	13.55	13.43	0.00	441.37	0.031	0.03	8.411	A
B-A	345.56	338.59	0.00	532.97	0.648	1.74	17.941	C
C-AB	14.40	14.32	0.00	680.10	0.021	0.02	5.407	A
C-A	223.50	223.50	0.00	-	-	-	-	-
A-B	142.29	142.29	0.00	-	-	-	-	-
A-C	73.78	73.78	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	16.18	16.08	0.00	302.33	0.054	0.06	12.572	B
B-A	412.63	406.45	0.00	522.37	0.790	3.29	29.498	D
C-AB	17.25	17.24	0.00	673.35	0.026	0.03	5.486	A
C-A	266.82	266.82	0.00	-	-	-	-	-
A-B	169.91	169.91	0.00	-	-	-	-	-
A-C	88.10	88.10	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	19.82	12.79	0.00	19.62	1.010	1.81	381.907	F
B-A	505.37	474.28	0.00	507.74	0.995	11.06	72.378	F
C-AB	21.25	21.22	0.00	664.48	0.032	0.03	5.596	A
C-A	326.67	326.67	0.00	-	-	-	-	-
A-B	208.09	208.09	0.00	-	-	-	-	-
A-C	107.90	107.90	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	19.82	18.63	0.00	25.01	0.792	2.11	358.252	F
B-A	505.37	488.57	0.00	507.70	0.995	15.26	111.720	F
C-AB	21.25	21.25	0.00	664.48	0.032	0.03	5.598	A
C-A	326.67	326.67	0.00	-	-	-	-	-
A-B	208.09	208.09	0.00	-	-	-	-	-
A-C	107.90	107.90	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	16.18	24.21	0.00	176.00	0.092	0.10	24.886	C
B-A	412.63	455.67	0.00	522.32	0.790	4.50	65.162	F
C-AB	17.25	17.28	0.00	673.35	0.026	0.03	5.486	A
C-A	266.82	266.82	0.00	-	-	-	-	-
A-B	169.91	169.91	0.00	-	-	-	-	-
A-C	88.10	88.10	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	13.55	13.83	0.00	416.72	0.033	0.03	8.941	A
B-A	345.56	355.76	0.00	532.94	0.648	1.95	21.346	C
C-AB	14.40	14.42	0.00	680.10	0.021	0.02	5.407	A
C-A	223.50	223.50	0.00	-	-	-	-	-
A-B	142.29	142.29	0.00	-	-	-	-	-
A-C	73.78	73.78	0.00	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	1.74	0.00	1.00	2.00	2.00			N/A	N/A
C-AB	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.06	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	3.29	0.00	1.00	7.00	10.00			N/A	N/A
C-AB	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	1.81	0.00	0.00	3.00	6.00			N/A	N/A
B-A	11.06	0.00	6.00	25.00	34.00			N/A	N/A
C-AB	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	2.11	0.00	0.00	4.00	7.00			N/A	N/A
B-A	15.26	0.00	7.00	38.00	52.00			N/A	N/A
C-AB	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.10	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	4.50	0.00	0.00	10.00	17.00			N/A	N/A
C-AB	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	1.95	0.00	0.00	2.00	6.00			N/A	N/A
C-AB	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, PM	2017 Base	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	B4547 NANT Y GARTH	T-Junction	Two-way	A,B,C	13.98	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	4547E		Major
B	B	4547S		Minor
C	C	4547W		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	13.10		0.00		2.20	250.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.70	5.80	4.10	3.60	✓	2.00	42	36

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	587.388	0.074	0.187	0.118	0.267
1	B-C	657.389	0.070	0.176	-	-
1	C-B	718.741	0.192	0.192	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	651.00	100.000
B	ONE HOUR	✓	245.00	100.000
C	ONE HOUR	✓	139.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	406.000	245.000
	B	224.000	0.000	21.000
	C	118.000	21.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.62	0.38
	B	0.91	0.00	0.09
	C	0.85	0.15	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.05	8.05	0.05	−1	A
B-A	0.51	15.25	1.03	2.00	C
C-AB	0.04	6.42	0.04	−1	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	15.81	15.69	0.00	548.48	0.029	0.03	6.754	A
B-A	168.64	166.73	0.00	515.65	0.327	0.48	10.264	B
C-AB	15.87	15.76	0.00	625.88	0.025	0.03	5.900	A
C-A	88.78	88.78	0.00	-	-	-	-	-
A-B	305.66	305.66	0.00	-	-	-	-	-
A-C	184.45	184.45	0.00	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	18.88	18.85	0.00	519.97	0.036	0.04	7.183	A
B-A	201.37	200.66	0.00	501.69	0.401	0.66	11.927	B
C-AB	18.98	18.96	0.00	608.29	0.031	0.03	6.108	A
C-A	105.98	105.98	0.00	-	-	-	-	-
A-B	364.99	364.99	0.00	-	-	-	-	-
A-C	220.25	220.25	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	23.12	23.07	0.00	471.23	0.049	0.05	8.031	A
B-A	246.63	245.20	0.00	482.42	0.511	1.01	15.081	C
C-AB	23.33	23.29	0.00	584.29	0.040	0.04	6.416	A
C-A	129.71	129.71	0.00	-	-	-	-	-
A-B	447.01	447.01	0.00	-	-	-	-	-
A-C	269.75	269.75	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	23.12	23.12	0.00	470.06	0.049	0.05	8.054	A
B-A	246.63	246.57	0.00	482.41	0.511	1.03	15.252	C
C-AB	23.33	23.33	0.00	584.29	0.040	0.04	6.416	A
C-A	129.71	129.71	0.00	-	-	-	-	-
A-B	447.01	447.01	0.00	-	-	-	-	-
A-C	269.75	269.75	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	18.88	18.93	0.00	518.75	0.036	0.04	7.205	A
B-A	201.37	202.75	0.00	501.68	0.401	0.68	12.097	B
C-AB	18.98	19.02	0.00	608.29	0.031	0.03	6.108	A
C-A	105.98	105.98	0.00	-	-	-	-	-
A-B	364.99	364.99	0.00	-	-	-	-	-
A-C	220.25	220.25	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	15.81	15.84	0.00	547.29	0.029	0.03	6.776	A
B-A	168.64	169.40	0.00	515.61	0.327	0.49	10.423	B
C-AB	15.87	15.89	0.00	625.88	0.025	0.03	5.903	A
C-A	88.78	88.78	0.00	-	-	-	-	-
A-B	305.66	305.66	0.00	-	-	-	-	-
A-C	184.45	184.45	0.00	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	0.48	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	0.66	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	1.01	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	1.03	0.00	0.00	0.00	2.00			N/A	N/A
C-AB	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	0.68	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:45-18:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	0.49	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, AM	2023 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	B4547 NANT Y GARTH	T-Junction	Two-way	A,B,C	196.47	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	4547E		Major
B	B	4547S		Minor
C	C	4547W		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	13.10		0.00		2.20	250.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.70	5.80	4.10	3.60	✓	2.00	42	36

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	587.388	0.074	0.187	0.118	0.267
1	B-C	657.389	0.070	0.176	-	-
1	C-B	718.741	0.192	0.192	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	306.00	100.000
B	ONE HOUR	✓	512.00	100.000
C	ONE HOUR	✓	338.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	202.000	104.000
	B	492.000	0.000	20.000
	C	318.000	20.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.66	0.34
	B	0.96	0.00	0.04
	C	0.94	0.06	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	1.10	516.61	2.64	9.00	F
B-A	1.08	191.32	29.79	68.00	F
C-AB	0.03	5.64	0.04	−1	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	15.06	14.90	0.00	402.19	0.037	0.04	9.288	A
B-A	370.40	361.77	0.00	529.34	0.700	2.16	20.558	C
C-AB	15.18	15.08	0.00	677.74	0.022	0.02	5.432	A
C-A	239.29	239.29	0.00	-	-	-	-	-
A-B	152.08	152.08	0.00	-	-	-	-	-
A-C	78.30	78.30	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	17.98	17.79	0.00	221.26	0.081	0.09	17.676	C
B-A	442.30	432.53	0.00	518.03	0.854	4.60	38.145	E
C-AB	18.19	18.17	0.00	670.64	0.027	0.03	5.517	A
C-A	285.67	285.67	0.00	-	-	-	-	-
A-B	181.59	181.59	0.00	-	-	-	-	-
A-C	93.49	93.49	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	22.02	13.85	0.00	20.06	1.098	2.13	405.463	F
B-A	541.70	485.88	0.00	502.43	1.078	18.56	105.783	F
C-AB	22.42	22.39	0.00	661.36	0.034	0.04	5.633	A
C-A	349.73	349.73	0.00	-	-	-	-	-
A-B	222.41	222.41	0.00	-	-	-	-	-
A-C	114.51	114.51	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	22.02	19.96	0.00	24.90	0.884	2.64	516.609	F
B-A	541.70	496.77	0.00	502.39	1.078	29.79	191.316	F
C-AB	22.42	22.42	0.00	661.36	0.034	0.04	5.635	A
C-A	349.73	349.73	0.00	-	-	-	-	-
A-B	222.41	222.41	0.00	-	-	-	-	-
A-C	114.51	114.51	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	17.98	18.25	0.00	26.34	0.683	2.58	377.705	F
B-A	442.30	501.13	0.00	517.95	0.854	15.08	166.823	F
C-AB	18.19	18.22	0.00	670.64	0.027	0.03	5.519	A
C-A	285.67	285.67	0.00	-	-	-	-	-
A-B	181.59	181.59	0.00	-	-	-	-	-
A-C	93.49	93.49	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	15.06	25.15	0.00	296.62	0.051	0.05	13.739	B
B-A	370.40	420.43	0.00	529.26	0.700	2.57	43.953	E
C-AB	15.18	15.20	0.00	677.74	0.022	0.02	5.435	A
C-A	239.29	239.29	0.00	-	-	-	-	-
A-B	152.08	152.08	0.00	-	-	-	-	-
A-C	78.30	78.30	0.00	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	2.16	0.00	1.00	3.00	4.00			N/A	N/A
C-AB	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	4.60	0.00	2.00	10.00	14.00			N/A	N/A
C-AB	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	2.13	0.00	0.00	4.00	7.00			N/A	N/A
B-A	18.56	2.00	15.00	35.00	43.00			N/A	N/A
C-AB	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	2.64	0.00	0.00	6.00	9.00			N/A	N/A
B-A	29.79	5.00	24.00	56.00	68.00			N/A	N/A
C-AB	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	2.58	0.00	1.00	3.00	4.00			N/A	N/A
B-A	15.08	0.00	10.00	33.00	44.00			N/A	N/A
C-AB	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	2.57	0.00	0.00	2.00	8.00	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.02	−1	−1	−1	−1			N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, PM	2023 Base	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	B4547 NANT Y GARTH	T-Junction	Two-way	A,B,C	15.50	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	4547E		Major
B	B	4547S		Minor
C	C	4547W		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	13.10		0.00		2.20	250.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.70	5.80	4.10	3.60	✓	2.00	42	36

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	587.388	0.074	0.187	0.118	0.267
1	B-C	657.389	0.070	0.176	-	-
1	C-B	718.741	0.192	0.192	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	694.00	100.000
B	ONE HOUR	✓	259.00	100.000
C	ONE HOUR	✓	148.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	433.000	261.000
	B	239.000	0.000	20.000
	C	126.000	22.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.62	0.38
	B	0.92	0.00	0.08
	C	0.85	0.15	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.05	8.47	0.05	−1	A
B-A	0.55	16.92	1.21	2.00	C
C-AB	0.04	6.53	0.04	−1	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	15.06	14.94	0.00	539.50	0.028	0.03	6.860	A
B-A	179.93	177.80	0.00	510.99	0.352	0.53	10.670	B
C-AB	16.63	16.52	0.00	619.85	0.027	0.03	5.967	A
C-A	94.79	94.79	0.00	-	-	-	-	-
A-B	325.99	325.99	0.00	-	-	-	-	-
A-C	196.49	196.49	0.00	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	17.98	17.95	0.00	506.87	0.035	0.04	7.362	A
B-A	214.86	214.01	0.00	496.12	0.433	0.75	12.720	B
C-AB	19.90	19.87	0.00	601.16	0.033	0.03	6.192	A
C-A	113.15	113.15	0.00	-	-	-	-	-
A-B	389.26	389.26	0.00	-	-	-	-	-
A-C	234.63	234.63	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	22.02	21.96	0.00	448.80	0.049	0.05	8.433	A
B-A	263.14	261.36	0.00	475.60	0.553	1.19	16.659	C
C-AB	24.47	24.43	0.00	575.68	0.043	0.04	6.530	A
C-A	138.48	138.48	0.00	-	-	-	-	-
A-B	476.74	476.74	0.00	-	-	-	-	-
A-C	287.37	287.37	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	22.02	22.02	0.00	447.09	0.049	0.05	8.468	A
B-A	263.14	263.06	0.00	475.59	0.553	1.21	16.918	C
C-AB	24.47	24.47	0.00	575.68	0.043	0.04	6.530	A
C-A	138.48	138.48	0.00	-	-	-	-	-
A-B	476.74	476.74	0.00	-	-	-	-	-
A-C	287.37	287.37	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	17.98	18.04	0.00	505.17	0.036	0.04	7.390	A
B-A	214.86	216.58	0.00	496.10	0.433	0.78	12.957	B
C-AB	19.90	19.94	0.00	601.16	0.033	0.03	6.196	A
C-A	113.15	113.15	0.00	-	-	-	-	-
A-B	389.26	389.26	0.00	-	-	-	-	-
A-C	234.63	234.63	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	15.06	15.09	0.00	538.03	0.028	0.03	6.886	A
B-A	179.93	180.85	0.00	510.95	0.352	0.55	10.937	B
C-AB	16.63	16.66	0.00	619.85	0.027	0.03	5.970	A
C-A	94.79	94.79	0.00	-	-	-	-	-
A-B	325.99	325.99	0.00	-	-	-	-	-
A-C	196.49	196.49	0.00	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	0.53	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	0.75	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	1.19	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	1.21	0.00	0.00	0.00	2.00			N/A	N/A
C-AB	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	0.78	0.00	0.00	1.00	1.00			N/A	N/A
C-AB	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:45-18:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	0.55	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, AM	2023 Base + Dev	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	B4547 NANT Y GARTH	T-Junction	Two-way	A,B,C	1082.56	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	4547E		Major
B	B	4547S		Minor
C	C	4547W		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	13.10		0.00		2.20	250.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.70	5.80	4.10	3.60	✓	2.00	42	36

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	587.388	0.074	0.187	0.118	0.267
1	B-C	657.389	0.070	0.176	-	-
1	C-B	718.741	0.192	0.192	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	466.00	100.000
B	ONE HOUR	✓	671.00	100.000
C	ONE HOUR	✓	338.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	362.000	104.000
	B	651.000	0.000	20.000
	C	318.000	20.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.78	0.22
	B	0.97	0.00	0.03
	C	0.94	0.06	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	1.30	1404.22	5.77	22.00	F
B-A	1.46	1106.23	162.28	200.00	F
C-AB	0.04	5.95	0.04	−1	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	15.06	14.48	0.00	114.49	0.132	0.14	35.803	E
B-A	490.11	459.78	0.00	520.42	0.942	7.58	46.973	E
C-AB	15.19	15.09	0.00	654.74	0.023	0.02	5.628	A
C-A	239.28	239.28	0.00	-	-	-	-	-
A-B	272.53	272.53	0.00	-	-	-	-	-
A-C	78.30	78.30	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	17.98	10.52	0.00	15.30	1.175	2.01	520.049	F
B-A	585.24	499.79	0.00	507.40	1.153	28.94	151.921	F
C-AB	18.21	18.18	0.00	643.29	0.028	0.03	5.758	A
C-A	285.65	285.65	0.00	-	-	-	-	-
A-B	325.43	325.43	0.00	-	-	-	-	-
A-C	93.49	93.49	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	22.02	15.49	0.00	17.67	1.246	3.64	850.869	F
B-A	716.76	488.88	0.00	489.42	1.465	85.91	436.859	F
C-AB	22.46	22.43	0.00	628.09	0.036	0.04	5.943	A
C-A	349.68	349.68	0.00	-	-	-	-	-
A-B	398.57	398.57	0.00	-	-	-	-	-
A-C	114.51	114.51	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	22.02	15.71	0.00	16.89	1.304	5.22	1206.005	F
B-A	716.76	489.29	0.00	489.41	1.465	142.78	837.003	F
C-AB	22.46	22.46	0.00	628.09	0.036	0.04	5.945	A
C-A	349.68	349.68	0.00	-	-	-	-	-
A-B	398.57	398.57	0.00	-	-	-	-	-
A-C	114.51	114.51	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	17.98	15.79	0.00	17.05	1.054	5.77	1395.357	F
B-A	585.24	507.23	0.00	507.38	1.153	162.28	1087.358	F
C-AB	18.21	18.24	0.00	643.29	0.028	0.03	5.761	A
C-A	285.65	285.65	0.00	-	-	-	-	-
A-B	325.43	325.43	0.00	-	-	-	-	-
A-C	93.49	93.49	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	15.06	15.04	0.00	17.42	0.865	5.77	1404.220	F
B-A	490.11	517.19	0.00	520.38	0.942	155.51	1106.230	F
C-AB	15.19	15.21	0.00	654.74	0.023	0.02	5.630	A
C-A	239.28	239.28	0.00	-	-	-	-	-
A-B	272.53	272.53	0.00	-	-	-	-	-
A-C	78.30	78.30	0.00	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	7.58	0.00	0.00	0.00	8.00			N/A	N/A
C-AB	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	2.01	0.00	0.00	0.00	5.00			N/A	N/A
B-A	28.94	0.00	3.00	77.00	122.00			N/A	N/A
C-AB	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	3.64	0.00	0.00	6.00	13.00			N/A	N/A
B-A	85.91	14.00	71.00	167.00	>199			N/A	N/A
C-AB	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	5.22	0.00	0.00	12.00	20.00			N/A	N/A
B-A	142.78	56.00	133.00	>199	>199			N/A	N/A
C-AB	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	5.77	0.00	0.00	14.00	22.00			N/A	N/A
B-A	162.28	71.00	153.00	>199	>199			N/A	N/A
C-AB	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	5.77	0.00	0.00	14.00	22.00			N/A	N/A
B-A	155.51	63.00	145.00	>199	>199			N/A	N/A
C-AB	0.02	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, PM	2023 Base + Dev	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	B4547 NANT Y GARTH	T-Junction	Two-way	A,B,C	92.34	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	4547E		Major
B	B	4547S		Minor
C	C	4547W		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	13.10		0.00		2.20	250.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.70	5.80	4.10	3.60	✓	2.00	42	36

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	587.388	0.074	0.187	0.118	0.267
1	B-C	657.389	0.070	0.176	-	-
1	C-B	718.741	0.192	0.192	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	854.00	100.000
B	ONE HOUR	✓	421.00	100.000
C	ONE HOUR	✓	148.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	593.000	261.000
	B	399.000	0.000	22.000
	C	126.000	22.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.69	0.31
	B	0.95	0.00	0.05
	C	0.85	0.15	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.94	279.52	1.99	2.00	F
B-A	0.95	86.76	9.96	39.00	F
C-AB	0.05	6.95	0.05	−1	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	16.56	16.41	0.00	442.24	0.037	0.04	8.451	A
B-A	300.39	294.70	0.00	502.07	0.598	1.42	16.935	C
C-AB	16.64	16.52	0.00	596.77	0.028	0.03	6.204	A
C-A	94.79	94.79	0.00	-	-	-	-	-
A-B	446.44	446.44	0.00	-	-	-	-	-
A-C	196.49	196.49	0.00	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	19.78	19.68	0.00	329.43	0.060	0.06	11.618	B
B-A	358.69	354.13	0.00	485.47	0.739	2.56	26.476	D
C-AB	19.91	19.88	0.00	573.66	0.035	0.04	6.500	A
C-A	113.14	113.14	0.00	-	-	-	-	-
A-B	533.09	533.09	0.00	-	-	-	-	-
A-C	234.63	234.63	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	24.22	22.53	0.00	68.11	0.356	0.49	76.630	F
B-A	439.31	417.98	0.00	462.51	0.950	7.89	61.811	F
C-AB	24.50	24.46	0.00	542.14	0.045	0.05	6.953	A
C-A	138.45	138.45	0.00	-	-	-	-	-
A-B	652.91	652.91	0.00	-	-	-	-	-
A-C	287.37	287.37	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	24.22	18.19	0.00	25.70	0.942	1.99	279.520	F
B-A	439.31	431.04	0.00	462.48	0.950	9.96	86.764	F
C-AB	24.50	24.50	0.00	542.14	0.045	0.05	6.953	A
C-A	138.45	138.45	0.00	-	-	-	-	-
A-B	652.91	652.91	0.00	-	-	-	-	-
A-C	287.37	287.37	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	19.78	27.43	0.00	266.23	0.074	0.08	15.537	C
B-A	358.69	385.83	0.00	485.39	0.739	3.18	42.451	E
C-AB	19.91	19.96	0.00	573.66	0.035	0.04	6.501	A
C-A	113.14	113.14	0.00	-	-	-	-	-
A-B	533.09	533.09	0.00	-	-	-	-	-
A-C	234.63	234.63	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	16.56	16.73	0.00	427.96	0.039	0.04	8.757	A
B-A	300.39	306.86	0.00	502.03	0.598	1.56	19.003	C
C-AB	16.64	16.67	0.00	596.77	0.028	0.03	6.205	A
C-A	94.79	94.79	0.00	-	-	-	-	-
A-B	446.44	446.44	0.00	-	-	-	-	-
A-C	196.49	196.49	0.00	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	1.42	?	?	?	?	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.06	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	2.56	0.00	0.00	5.00	7.00			N/A	N/A
C-AB	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.49	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	7.89	0.00	3.00	20.00	27.00			N/A	N/A
C-AB	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	1.99	0.00	1.00	2.00	2.00			N/A	N/A
B-A	9.96	0.00	2.00	26.00	39.00			N/A	N/A
C-AB	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.08	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	3.18	0.00	0.00	6.00	11.00			N/A	N/A
C-AB	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:45-18:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	1.56	0.00	0.00	1.00	5.00			N/A	N/A
C-AB	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Secondary Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Secondary Base + Dev, PM	2023 Secondary Base + Dev	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	B4547 NANT Y GARTH	T-Junction	Two-way	A,B,C	29.25	D

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	4547E		Major
B	B	4547S		Minor
C	C	4547W		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	13.10		0.00		2.20	250.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.70	5.80	4.10	3.60	✓	2.00	42	36

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	587.388	0.074	0.187	0.118	0.267
1	B-C	657.389	0.070	0.176	-	-
1	C-B	718.741	0.192	0.192	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	780.00	100.000
B	ONE HOUR	✓	347.00	100.000
C	ONE HOUR	✓	148.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	519.000	261.000
	B	325.000	0.000	22.000
	C	126.000	22.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.67	0.33
	B	0.94	0.00	0.06
	C	0.85	0.15	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-C	0.08	13.46	0.09	−1	B
B-A	0.76	31.85	3.02	10.00	D
C-AB	0.04	6.75	0.05	−1	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	16.56	16.43	0.00	496.88	0.033	0.03	7.491	A
B-A	244.68	241.04	0.00	506.20	0.483	0.91	13.404	B
C-AB	16.63	16.52	0.00	607.44	0.027	0.03	6.092	A
C-A	94.79	94.79	0.00	-	-	-	-	-
A-B	390.73	390.73	0.00	-	-	-	-	-
A-C	196.49	196.49	0.00	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	19.78	19.73	0.00	434.30	0.046	0.05	8.682	A
B-A	292.17	290.17	0.00	490.40	0.596	1.41	17.791	C
C-AB	19.91	19.88	0.00	586.38	0.034	0.04	6.354	A
C-A	113.14	113.14	0.00	-	-	-	-	-
A-B	466.57	466.57	0.00	-	-	-	-	-
A-C	234.63	234.63	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	24.22	24.07	0.00	302.85	0.080	0.09	12.906	B
B-A	357.83	352.04	0.00	468.57	0.764	2.86	29.472	D
C-AB	24.49	24.44	0.00	557.65	0.044	0.05	6.751	A
C-A	138.46	138.46	0.00	-	-	-	-	-
A-B	571.43	571.43	0.00	-	-	-	-	-
A-C	287.37	287.37	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	24.22	24.21	0.00	291.57	0.083	0.09	13.464	B
B-A	357.83	357.19	0.00	468.55	0.764	3.02	31.852	D
C-AB	24.49	24.49	0.00	557.65	0.044	0.05	6.751	A
C-A	138.46	138.46	0.00	-	-	-	-	-
A-B	571.43	571.43	0.00	-	-	-	-	-
A-C	287.37	287.37	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	19.78	19.94	0.00	424.76	0.047	0.05	8.897	A
B-A	292.17	298.08	0.00	490.38	0.596	1.54	19.248	C
C-AB	19.91	19.95	0.00	586.38	0.034	0.04	6.357	A
C-A	113.14	113.14	0.00	-	-	-	-	-
A-B	466.57	466.57	0.00	-	-	-	-	-
A-C	234.63	234.63	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	16.56	16.62	0.00	492.33	0.034	0.04	7.567	A
B-A	244.68	247.00	0.00	506.16	0.483	0.96	14.012	B
C-AB	16.63	16.66	0.00	607.44	0.027	0.03	6.095	A
C-A	94.79	94.79	0.00	-	-	-	-	-
A-B	390.73	390.73	0.00	-	-	-	-	-
A-C	196.49	196.49	0.00	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	0.91	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	1.41	0.00	0.00	2.00	3.00			N/A	N/A
C-AB	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	2.86	0.00	0.00	4.00	10.00			N/A	N/A
C-AB	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	3.02	0.00	0.00	2.00	9.00			N/A	N/A
C-AB	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.05	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	1.54	0.00	0.00	3.00	5.00			N/A	N/A
C-AB	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:45-18:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-C	0.04	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
B-A	0.96	0.00	0.00	1.00	3.00			N/A	N/A
C-AB	0.03	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A4244_B4547_ENTRY_LANE.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A4244 B4547\2018 DF
Report generation date: 14/06/2018 17:03:21

« (Default Analysis Set) - 2017 Base, AM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Direct/Resultant Flows
» Turning Proportions
» Vehicle Mix
» Results
» Lane Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 [Entry Lane Simulation] - 2017 Base			
Arm 4244E	0.41	3.62	N/A	A
Arm 4244S	1.94	12.27	N/A	B
Arm 4366	14.29	114.07	N/A	F
Arm 4547	0.12	2.02	N/A	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:15 - 17:45
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:15 - 17:45
"D8 - 2023 Base + Dev + Seasonality, PM Aug" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 17:03:20

File summary

Title	(untitled)
Location	
Site Number	
Date	17/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

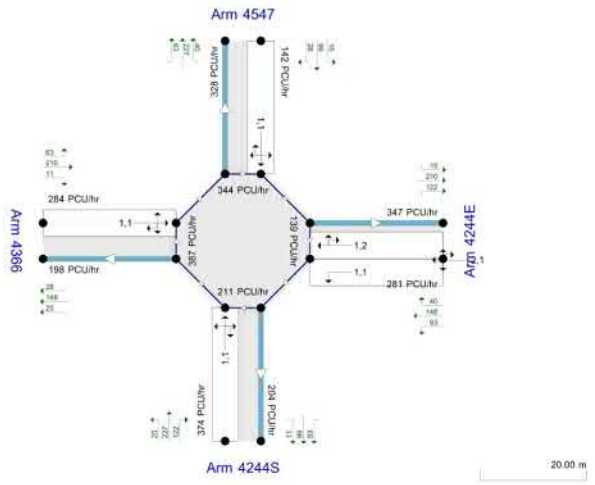
Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Entry Lane Analysis Options

Stop Criteria (%)	Random Seed	Results Refresh Speed (s)	Individual Vehicle Animation Number Of Trials	Time Step Size (s)	Last Run Random Seed	Last Run Number Of Trials
5.00	-1	3	1	10	1427851486	259



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	Entry Lane Simulation		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base, AM	2017 Base	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	A4244 B4547 B4366	Roundabout	4244E,4244S,4366,4547			34.61	D

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
4244E	4244E	(untitled)	
4244S	4244S	(untitled)	
4366	4366	(untitled)	
4547	4547	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
4244E	0.00	99999.00
4244S	0.00	99999.00
4366	0.00	99999.00
4547	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
4244E	3.00	10.00	18.00	25.00	48.00	40.00	
4244S	5.00	6.40	7.30	15.00	48.00	56.00	
4366	4.00	5.00	15.00	40.00	48.00	26.00	
4547	3.00	5.50	10.00	41.00	48.00	23.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
4244E		(calculated)	(calculated)	0.630	1807.798
4244S		(calculated)	(calculated)	0.565	1588.495
4366		(calculated)	(calculated)	0.593	1517.753
4547		(calculated)	(calculated)	0.573	1395.442

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
4244E	Percentage			90.00
4244S	Percentage			55.00
4366	Percentage			35.00
4547	Percentage			80.00

Entry Lane Analysis: Arm options

Arm	Lane Capacity Source	Traffic Considering Secondary Lanes (%)
4244E	Evenly split	10.00
4244S	Evenly split	10.00
4366	Evenly split	10.00
4547	Evenly split	10.00

Lanes

Arm	Lane Level	Lane	Has Limited Storage	Storage (PCU)	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
4244E	**1**	1	✓	6.00	0.00	99999.00
4244E	**1**	2	✓	6.00	0.00	99999.00
4244E	**2**	1		Infinity		
4244S	**1**	1		Infinity	0.00	99999.00
4366	**1**	1		Infinity	0.00	99999.00
4547	**1**	1		Infinity	0.00	99999.00

Entry Lane slope and intercept

Arm	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
4244E	(calculated)	(calculated)	0.315	903.899
4244E	(calculated)	(calculated)	0.315	903.899
4244S	(calculated)	(calculated)	0.565	1588.495
4366	(calculated)	(calculated)	0.593	1517.753
4547	(calculated)	(calculated)	0.573	1395.442

Lane Movements

Junction	Arm	Lane Level	Lane	Arm			
				4244E	4244S	4366	4547
1	**4244E**	**1**	**1**		✓		
1	**4244E**	**1**	**2**	✓		✓	✓
1	**4244E**	**2**	**1**	✓	✓	✓	✓
1	**4244S**	**1**	**1**	✓	✓	✓	✓
1	**4366**	**1**	**1**	✓	✓	✓	✓
1	**4547**	**1**	**1**	✓	✓	✓	✓

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
4244E	ONE HOUR	✓	385.00	100.000
4244S	ONE HOUR	✓	493.00	100.000
4366	ONE HOUR	✓	365.00	100.000
4547	ONE HOUR	✓	180.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	**4244E**	289.85	289.85		
07:45-08:00	**4244S**	371.16	371.16		
07:45-08:00	**4366**	274.79	274.79		
07:45-08:00	**4547**	135.51	135.51		
08:00-08:15	**4244E**	346.11	346.11		
08:00-08:15	**4244S**	443.20	443.20		
08:00-08:15	**4366**	328.13	328.13		
08:00-08:15	**4547**	161.82	161.82		
08:15-08:30	**4244E**	423.89	423.89		
08:15-08:30	**4244S**	542.80	542.80		
08:15-08:30	**4366**	401.87	401.87		
08:15-08:30	**4547**	198.18	198.18		
08:30-08:45	**4244E**	423.89	423.89		
08:30-08:45	**4244S**	542.80	542.80		
08:30-08:45	**4366**	401.87	401.87		
08:30-08:45	**4547**	198.18	198.18		
08:45-09:00	**4244E**	346.11	346.11		
08:45-09:00	**4244S**	443.20	443.20		
08:45-09:00	**4366**	328.13	328.13		
08:45-09:00	**4547**	161.82	161.82		
09:00-09:15	**4244E**	289.85	289.85		
09:00-09:15	**4244S**	371.16	371.16		
09:00-09:15	**4366**	274.79	274.79		
09:00-09:15	**4547**	135.51	135.51		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.000	127.000	200.000	58.000
	4244S	165.000	0.000	30.000	298.000
	4366	264.000	12.000	0.000	89.000
	4547	20.000	124.000	36.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.00	0.33	0.52	0.15
	4244S	0.33	0.00	0.06	0.60
	4366	0.72	0.03	0.00	0.24
	4547	0.11	0.69	0.20	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	1.000	1.000	1.000	1.000
	4244S	1.000	1.000	1.000	1.000
	4366	1.000	1.000	1.000	1.000
	4547	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.0	0.0	0.0	0.0
	4244S	0.0	0.0	0.0	0.0
	4366	0.0	0.0	0.0	0.0
	4547	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)
4244E	3.62	0.41	1.89	A	351.58	527.37	26.95	3.07	0.30
4244S	12.27	1.94	6.81	B	452.86	679.29	95.88	8.47	1.07
4366	114.07	14.29	37.76	F	332.24	498.36	512.49	61.70	5.69
4547	2.02	0.12	0.55	A	165.37	248.05	6.73	1.63	0.07

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	281.00	70.25	281.00	347.49	138.53	0.00	0.22	2.484	A
4244S	373.90	93.47	374.36	203.86	211.04	0.00	0.48	4.650	A
4366	279.61	69.90	284.48	198.07	387.34	0.00	1.41	16.077	C
4547	143.40	35.85	142.24	328.03	343.78	0.00	0.07	1.296	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	343.32	85.83	343.32	410.73	148.96	0.00	0.24	2.824	A
4244S	454.75	113.69	437.84	236.99	256.91	0.00	1.00	6.956	A
4366	315.52	78.88	343.55	234.67	460.08	0.00	2.29	27.764	D
4547	155.91	38.98	156.14	400.08	403.55	0.00	0.05	1.532	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	429.96	107.49	429.96	496.45	176.53	0.24	0.41	3.442	A
4244S	548.80	137.20	544.63	279.38	338.69	1.00	1.94	12.272	B
4366	403.55	100.89	386.87	305.33	577.99	2.29	9.93	70.932	F
4547	192.97	48.24	192.28	484.17	480.69	0.05	0.12	1.830	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	423.47	105.87	423.47	487.64	194.13	0.41	0.41	3.619	A
4244S	533.51	133.38	527.03	296.76	324.79	1.94	1.81	12.240	B
4366	393.36	98.34	392.90	297.22	554.59	9.93	14.29	114.073	F
4547	199.46	49.86	202.70	468.42	479.07	0.12	0.08	2.021	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	343.78	85.95	343.78	412.59	154.29	0.41	0.24	2.930	A
4244S	439.23	109.81	434.13	231.43	271.97	1.81	0.83	6.987	A
4366	325.71	81.43	338.22	245.10	461.00	14.29	5.78	83.832	F
4547	160.08	40.02	159.85	392.20	407.03	0.08	0.06	1.538	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	287.95	71.99	287.95	328.73	135.06	0.24	0.21	2.563	A
4244S	366.95	91.74	366.95	201.31	222.86	0.83	0.52	4.945	A
4366	275.68	68.92	265.71	205.25	384.56	5.78	1.27	25.504	D
4547	140.39	35.10	141.54	328.03	322.24	0.06	0.03	1.307	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	3.01	0.20	2.484	A	A
4244S	7.11	0.47	4.650	A	A
4366	18.21	1.21	16.077	C	B
4547	0.73	0.05	1.296	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	4.07	0.27	2.824	A	A
4244S	12.72	0.85	6.956	A	A
4366	37.44	2.50	27.764	D	C
4547	1.04	0.07	1.532	A	A

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	6.08	0.41	3.442	A	A
4244S	27.59	1.84	12.272	B	B
4366	106.47	7.10	70.932	F	E
4547	1.50	0.10	1.830	A	A

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	6.40	0.43	3.619	A	A
4244S	27.64	1.84	12.240	B	B
4366	181.67	12.11	114.073	F	F
4547	1.66	0.11	2.021	A	A

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	4.26	0.28	2.930	A	A
4244S	13.04	0.87	6.987	A	A
4366	133.01	8.87	83.832	F	F
4547	1.05	0.07	1.538	A	A

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	3.14	0.21	2.563	A	A
4244S	7.78	0.52	4.945	A	A
4366	35.69	2.38	25.504	D	C
4547	0.74	0.05	1.307	A	A

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.22	0.00	0.00	0.53	0.94
4244S	0.48	0.00	0.00	1.55	2.59
4366	1.41	0.00	-0.01	3.63	5.01
4547	0.07	0.00	0.00	0.00	0.10

Queue Variation results: (08:00-08:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.24	0.00	0.00	0.60	1.10
4244S	1.00	0.00	0.00	2.93	4.13
4366	2.29	0.00	1.08	5.31	7.51
4547	0.05	0.00	0.00	0.00	0.00

Queue Variation results: (08:15-08:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.41	0.00	0.00	1.17	1.89
4244S	1.94	0.00	0.30	4.93	6.81
4366	9.93	0.00	7.34	22.53	27.68
4547	0.12	0.00	0.00	0.00	0.55

Queue Variation results: (08:30-08:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.41	0.00	0.00	1.16	1.84
4244S	1.81	0.00	0.26	4.68	5.91
4366	14.29	0.00	10.69	31.10	37.76
4547	0.08	0.00	0.00	0.00	0.12

Queue Variation results: (08:45-09:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.24	0.00	0.00	0.63	0.98
4244S	0.83	0.00	0.00	2.21	3.72
4366	5.78	0.00	2.13	14.05	26.35
4547	0.06	0.00	0.00	0.00	0.00

Queue Variation results: (09:00-09:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.21	0.00	0.00	0.52	0.97
4244S	0.52	0.00	0.00	1.46	2.01
4366	1.27	0.00	0.00	3.43	5.01
4547	0.03	0.00	0.00	0.00	0.00

Lane Results

Lanes: Main Results for each time segment

Main results: (07:45-08:00)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	93.36	23.34	93.13	774.22	0.121	0.00	0.05	1.923	A
4244E	1	2	187.64	46.91	183.24	774.22	0.242	0.00	0.17	2.770	A
4244E	2	1	281.00	70.25	281.00			0.00	0.00	0.000	A
4244S	1	1	373.90	93.47	374.36	808.15	0.463	0.00	0.48	4.650	A
4366	1	1	279.61	69.90	284.48	450.81	0.620	0.00	1.41	16.077	C
4547	1	1	143.40	35.85	142.24	958.82	0.150	0.00	0.07	1.296	A

Main results: (08:00-08:15)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	116.99	29.25	117.22	771.26	0.152	0.05	0.07	2.261	A
4244E	1	2	226.33	56.58	227.72	771.26	0.293	0.17	0.17	3.097	A
4244E	2	1	343.32	85.83	343.32			0.00	0.00	0.001	A
4244S	1	1	454.75	113.69	437.84	793.90	0.573	0.48	1.00	6.956	A
4366	1	1	315.52	78.88	343.55	435.71	0.724	1.41	2.29	27.764	D
4547	1	1	155.91	38.98	156.14	931.43	0.167	0.07	0.05	1.532	A

Main results: (08:15-08:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	137.14	34.29	138.53	763.44	0.180	0.07	0.08	2.370	A
4244E	1	2	292.82	73.20	303.01	763.44	0.384	0.17	0.33	3.963	A
4244E	2	1	429.96	107.49	429.96			0.00	0.00	0.001	A
4244S	1	1	548.80	137.20	544.63	768.51	0.714	1.00	1.94	12.272	B
4366	1	1	403.55	100.89	386.87	411.24	0.981	2.29	9.93	70.932	F
4547	1	1	192.97	48.24	192.28	896.08	0.215	0.05	0.12	1.830	A

Main results: (08:30-08:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	136.22	34.05	138.53	758.45	0.180	0.08	0.07	2.377	A
4244E	1	2	287.26	71.81	288.88	758.45	0.379	0.33	0.34	4.213	A
4244E	2	1	423.47	105.87	423.47			0.00	0.00	0.010	A
4244S	1	1	533.51	133.38	527.03	772.83	0.690	1.94	1.81	12.240	B
4366	1	1	393.36	98.34	392.90	416.10	0.945	9.93	14.29	114.073	F
4547	1	1	199.46	49.86	202.70	896.83	0.222	0.12	0.08	2.021	A

Main results: (08:45-09:00)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	115.83	28.96	113.75	769.75	0.150	0.07	0.12	2.210	A
4244E	1	2	227.95	56.99	235.37	769.75	0.296	0.34	0.12	3.286	A
4244E	2	1	343.78	85.95	343.78			0.00	0.00	0.002	A
4244S	1	1	439.23	109.81	434.13	789.23	0.557	1.81	0.83	6.987	A
4366	1	1	325.71	81.43	338.22	435.52	0.748	14.29	5.78	83.832	F
4547	1	1	160.08	40.02	159.85	929.84	0.172	0.08	0.06	1.538	A

Main results: (09:00-09:15)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	96.37	24.09	97.53	775.20	0.124	0.12	0.05	1.998	A
4244E	1	2	191.58	47.90	191.58	775.20	0.247	0.12	0.15	2.845	A
4244E	2	1	287.95	71.99	287.95			0.00	0.00	0.000	A
4244S	1	1	366.95	91.74	366.95	804.48	0.456	0.83	0.52	4.945	A
4366	1	1	275.68	68.92	265.71	451.39	0.611	5.78	1.27	25.504	D
4547	1	1	140.39	35.10	141.54	968.69	0.145	0.06	0.03	1.307	A

Lanes: Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	0.78	0.05	1.923	A	A
4244E	1	2	2.22	0.15	2.770	A	A
4244E	2	1	0.00	0.00	0.000	A	A
4244S	1	1	7.11	0.47	4.650	A	A
4366	1	1	18.21	1.21	16.077	C	B
4547	1	1	0.73	0.05	1.296	A	A

Queueing Delay results: (08:00-08:15)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.07	0.07	2.261	A	A
4244E	1	2	3.00	0.20	3.097	A	A
4244E	2	1	0.00	0.00	0.001	A	A
4244S	1	1	12.72	0.85	6.956	A	A
4366	1	1	37.44	2.50	27.764	D	C
4547	1	1	1.04	0.07	1.532	A	A

Queueing Delay results: (08:15-08:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.37	0.09	2.370	A	A
4244E	1	2	4.70	0.31	3.963	A	A
4244E	2	1	0.00	0.00	0.001	A	A
4244S	1	1	27.59	1.84	12.272	B	B
4366	1	1	106.47	7.10	70.932	F	E
4547	1	1	1.50	0.10	1.830	A	A

Queueing Delay results: (08:30-08:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.38	0.09	2.377	A	A
4244E	1	2	5.00	0.33	4.213	A	A
4244E	2	1	0.02	0.00	0.010	A	A
4244S	1	1	27.64	1.84	12.240	B	B
4366	1	1	181.67	12.11	114.073	F	F
4547	1	1	1.66	0.11	2.021	A	A

Queueing Delay results: (08:45-09:00)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.06	0.07	2.210	A	A
4244E	1	2	3.19	0.21	3.286	A	A
4244E	2	1	0.00	0.00	0.002	A	A
4244S	1	1	13.04	0.87	6.987	A	A
4366	1	1	133.01	8.87	83.832	F	F
4547	1	1	1.05	0.07	1.538	A	A

Queueing Delay results: (09:00-09:15)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	0.81	0.05	1.998	A	A
4244E	1	2	2.32	0.15	2.845	A	A
4244E	2	1	0.00	0.00	0.000	A	A
4244S	1	1	7.78	0.52	4.945	A	A
4366	1	1	35.69	2.38	25.504	D	C
4547	1	1	0.74	0.05	1.307	A	A

Lanes: Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.05	0.00	0.00	0.00	0.00
4244E	1	2	0.17	0.00	0.00	0.31	0.81
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	0.48	0.00	0.00	1.55	2.59
4366	1	1	1.41	0.00	-0.01	3.63	5.01
4547	1	1	0.07	0.00	0.00	0.00	0.10

Queue Variation results: (08:00-08:15)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.07	0.00	0.00	0.00	0.16
4244E	1	2	0.17	0.00	0.00	0.26	0.90
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	1.00	0.00	0.00	2.93	4.13
4366	1	1	2.29	0.00	1.08	5.31	7.51
4547	1	1	0.05	0.00	0.00	0.00	0.00

Queue Variation results: (08:15-08:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.08	0.00	0.00	0.00	0.23
4244E	1	2	0.33	0.00	0.00	0.93	1.74
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	1.94	0.00	0.30	4.93	6.81
4366	1	1	9.93	0.00	7.34	22.53	27.68
4547	1	1	0.12	0.00	0.00	0.00	0.55

Queue Variation results: (08:30-08:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.07	0.00	0.00	0.00	0.01
4244E	1	2	0.34	0.00	0.00	0.93	1.74
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	1.81	0.00	0.26	4.68	5.91
4366	1	1	14.29	0.00	10.69	31.10	37.76
4547	1	1	0.06	0.00	0.00	0.00	0.12

Queue Variation results: (08:45-09:00)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.12	0.00	0.00	0.01	0.65
4244E	1	2	0.12	0.00	0.00	0.00	0.60
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	0.83	0.00	0.00	2.21	3.72
4366	1	1	5.78	0.00	2.13	14.05	28.35
4547	1	1	0.06	0.00	0.00	0.00	0.00

Queue Variation results: (09:00-09:15)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.05	0.00	0.00	0.00	0.00
4244E	1	2	0.15	0.00	0.00	0.16	0.84
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	0.52	0.00	0.00	1.46	2.01
4366	1	1	1.27	0.00	0.00	3.43	5.01
4547	1	1	0.03	0.00	0.00	0.00	0.00

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A4244_B4547_ENTRY_LANE.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A4244 B4547\2018 DF
Report generation date: 14/06/2018 17:05:07

« (Default Analysis Set) - 2017 Base, PM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Direct/Resultant Flows
» Turning Proportions
» Vehicle Mix
» Results
» Lane Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 [Entry Lane Simulation] - 2017 Base			
Arm 4244E	0.58	4.57	N/A	A
Arm 4244S	0.57	5.66	N/A	A
Arm 4366	2.25	23.49	N/A	C
Arm 4547	0.44	4.26	N/A	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM" model duration: 07:45 - 09:15
"D2 - 2017 Base, PM " model duration: 16:15 - 17:45
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:15 - 17:45
"D8 - 2023 Base + Dev + Seasonality, PM Aug" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 17:05:06

File summary

Title	(untitled)
Location	
Site Number	
Date	17/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

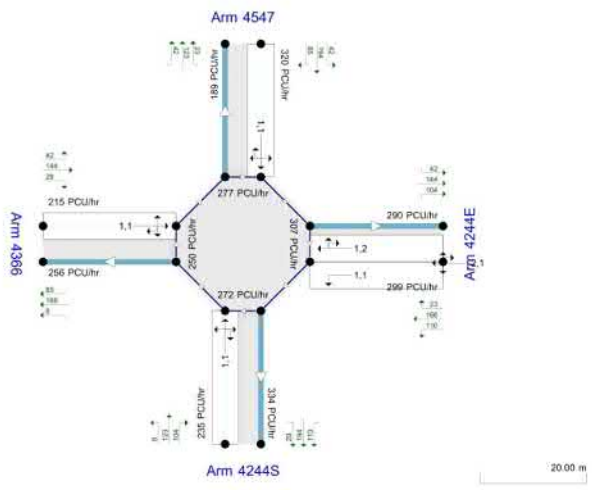
Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Entry Lane Analysis Options

Stop Criteria (%)	Random Seed	Results Refresh Speed (s)	Individual Vehicle Animation Number Of Trials	Time Step Size (s)	Last Run Random Seed	Last Run Number Of Trials
5.00	-1	3	1	10	1607364192	226



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	Entry Lane Simulation		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017 Base, PM	2017 Base	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	A4244 B4547 B4366	Roundabout	4244E,4244S,4366,4547			8.50	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
4244E	4244E	(untitled)	
4244S	4244S	(untitled)	
4366	4366	(untitled)	
4547	4547	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
4244E	0.00	99999.00
4244S	0.00	99999.00
4366	0.00	99999.00
4547	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
4244E	3.00	10.00	18.00	25.00	48.00	40.00	
4244S	5.00	6.40	7.30	15.00	48.00	56.00	
4366	4.00	5.00	15.00	40.00	48.00	26.00	
4547	3.00	5.50	10.00	41.00	48.00	23.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
4244E		(calculated)	(calculated)	0.630	1807.798
4244S		(calculated)	(calculated)	0.565	1588.495
4366		(calculated)	(calculated)	0.593	1517.753
4547		(calculated)	(calculated)	0.573	1395.442

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
4244E	Percentage			90.00
4244S	Percentage			55.00
4366	Percentage			35.00
4547	Percentage			80.00

Entry Lane Analysis: Arm options

Arm	Lane Capacity Source	Traffic Considering Secondary Lanes (%)
4244E	Evenly split	10.00
4244S	Evenly split	10.00
4366	Evenly split	10.00
4547	Evenly split	10.00

Lanes

Arm	Lane Level	Lane	Has Limited Storage	Storage (PCU)	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
4244E	1	1	✓	6.00	0.00	99999.00
4244E	1	2	✓	6.00	0.00	99999.00
4244E	2	1		Infinity		
4244S	1	1		Infinity	0.00	99999.00
4366	1	1		Infinity	0.00	99999.00
4547	1	1		Infinity	0.00	99999.00

Entry Lane slope and intercept

Arm	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
4244E	(calculated)	(calculated)	0.315	903.899
4244E	(calculated)	(calculated)	0.315	903.899
4244S	(calculated)	(calculated)	0.565	1588.495
4366	(calculated)	(calculated)	0.593	1517.753
4547	(calculated)	(calculated)	0.573	1395.442

Lane Movements

Junction	Arm	Lane Level	Lane	Arm			
				4244E	4244S	4366	4547
1	4244E	1	1		✓		
1	4244E	1	2	✓		✓	✓
1	4244E	2	1	✓	✓	✓	✓
1	4244S	1	1	✓	✓	✓	✓
1	4366	1	1	✓	✓	✓	✓
1	4547	1	1	✓	✓	✓	✓

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
4244E	ONE HOUR	✓	419.00	100.000
4244S	ONE HOUR	✓	321.00	100.000
4366	ONE HOUR	✓	284.00	100.000
4547	ONE HOUR	✓	394.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	4244E	315.45	315.45		
16:15-16:30	4244S	241.67	241.67		
16:15-16:30	4366	213.81	213.81		
16:15-16:30	4547	296.62	296.62		
16:30-16:45	4244E	376.67	376.67		
16:30-16:45	4244S	288.57	288.57		
16:30-16:45	4366	255.31	255.31		
16:30-16:45	4547	354.20	354.20		
16:45-17:00	4244E	461.33	461.33		
16:45-17:00	4244S	353.43	353.43		
16:45-17:00	4366	312.69	312.69		
16:45-17:00	4547	433.80	433.80		
17:00-17:15	4244E	461.33	461.33		
17:00-17:15	4244S	353.43	353.43		
17:00-17:15	4366	312.69	312.69		
17:00-17:15	4547	433.80	433.80		
17:15-17:30	4244E	376.67	376.67		
17:15-17:30	4244S	288.57	288.57		
17:15-17:30	4366	255.31	255.31		
17:15-17:30	4547	354.20	354.20		
17:30-17:45	4244E	315.45	315.45		
17:30-17:45	4244S	241.67	241.67		
17:30-17:45	4366	213.81	213.81		
17:30-17:45	4547	296.62	296.62		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.000	162.000	226.000	31.000
	4244S	142.000	0.000	13.000	166.000
	4366	198.000	35.000	0.000	51.000
	4547	57.000	239.000	98.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.00	0.39	0.54	0.07
	4244S	0.44	0.00	0.04	0.52
	4366	0.70	0.12	0.00	0.18
	4547	0.14	0.61	0.25	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	1.000	1.000	1.000	1.000
	4244S	1.000	1.000	1.000	1.000
	4366	1.000	1.000	1.000	1.000
	4547	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.0	0.0	0.0	0.0
	4244S	0.0	0.0	0.0	0.0
	4366	0.0	0.0	0.0	0.0
	4547	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)
4244E	4.57	0.58	2.12	A	383.85	575.77	35.45	3.69	0.39
4244S	5.66	0.57	2.53	A	287.96	431.95	32.52	4.52	0.36
4366	23.49	2.25	7.94	C	258.72	388.08	103.06	15.93	1.15
4547	4.26	0.44	2.62	A	366.55	549.82	29.15	3.18	0.32

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	299.20	74.80	299.20	289.65	307.17	0.00	0.24	2.899	A
4244S	231.24	57.81	234.69	333.72	271.59	0.00	0.26	3.122	A
4366	214.51	53.63	215.31	256.19	250.09	0.00	0.58	8.806	A
4547	320.71	80.18	320.18	188.76	276.64	0.00	0.17	2.062	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	380.71	95.18	380.97	340.62	330.53	0.00	0.33	3.501	A
4244S	288.32	72.08	289.12	390.53	323.10	0.00	0.31	4.042	A
4366	245.58	61.39	236.81	303.45	308.76	0.00	1.01	12.838	B
4547	353.63	88.41	352.83	227.26	318.32	0.00	0.28	2.688	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	478.67	119.67	478.67	429.56	404.87	0.33	0.58	4.176	A
4244S	335.04	83.76	344.34	489.56	391.33	0.31	0.51	5.396	A
4366	314.87	78.72	307.17	365.84	369.82	1.01	2.02	20.372	C
4547	435.66	108.92	435.13	277.70	399.29	0.28	0.42	4.261	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	431.68	107.92	431.68	429.56	417.08	0.58	0.46	4.570	A
4244S	356.28	89.07	359.20	478.14	382.04	0.51	0.57	5.657	A
4366	315.40	78.85	330.27	365.31	375.93	2.02	2.25	23.490	C
4547	435.40	108.85	430.88	290.44	415.75	0.42	0.44	4.229	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	390.27	97.57	390.27	341.42	326.81	0.46	0.41	3.529	A
4244S	269.20	67.30	269.20	403.54	311.95	0.57	0.27	4.114	A
4366	260.71	65.18	263.10	295.49	285.66	2.25	1.09	15.186	C
4547	338.76	84.69	340.09	220.62	328.14	0.44	0.23	2.993	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	322.57	80.64	322.57	286.73	301.86	0.41	0.25	2.906	A
4244S	247.70	61.92	248.76	343.27	282.74	0.27	0.16	3.180	A
4366	201.24	50.31	203.63	269.73	261.77	1.09	0.52	9.537	A
4547	315.13	78.78	313.01	189.82	275.58	0.23	0.18	2.162	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	3.78	0.25	2.899	A	A
4244S	3.13	0.21	3.122	A	A
4366	7.78	0.52	8.806	A	A
4547	2.60	0.17	2.062	A	A

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	5.50	0.37	3.501	A	A
4244S	4.90	0.33	4.042	A	A
4366	13.45	0.90	12.838	B	B
4547	3.96	0.26	2.688	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	7.99	0.53	4.176	A	A
4244S	7.87	0.52	5.396	A	A
4366	25.60	1.71	20.372	C	C
4547	7.69	0.51	4.261	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	8.79	0.59	4.570	A	A
4244S	8.35	0.56	5.657	A	A
4366	30.91	2.06	23.490	C	C
4547	7.78	0.52	4.229	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	5.52	0.37	3.529	A	A
4244S	5.01	0.33	4.114	A	A
4366	16.60	1.11	15.186	C	B
4547	4.40	0.29	2.993	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	3.88	0.26	2.906	A	A
4244S	3.26	0.22	3.180	A	A
4366	8.72	0.58	9.537	A	A
4547	2.71	0.18	2.162	A	A

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.24	0.00	0.00	0.55	0.96
4244S	0.26	0.00	0.00	0.56	1.28
4366	0.58	0.00	0.00	1.62	2.61
4547	0.17	0.00	0.00	0.13	0.76

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.33	0.00	0.00	1.02	1.69
4244S	0.31	0.00	0.00	0.81	1.61
4366	1.01	0.00	0.00	2.81	4.18
4547	0.28	0.00	0.00	0.74	1.56

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.58	0.00	0.00	1.59	2.12
4244S	0.51	0.00	0.00	1.49	2.53
4366	2.02	0.00	0.49	4.70	6.18
4547	0.42	0.00	0.00	1.05	2.62

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.46	0.00	0.00	1.30	1.93
4244S	0.57	0.00	0.00	1.69	2.52
4366	2.25	0.00	0.62	6.34	7.94
4547	0.44	0.00	0.00	1.13	2.21

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.41	0.00	0.00	0.96	1.57
4244S	0.27	0.00	0.00	0.76	1.52
4366	1.09	0.00	0.00	2.74	3.85
4547	0.23	0.00	0.00	0.59	0.97

Queue Variation results: (17:30-17:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.25	0.00	0.00	0.66	1.27
4244S	0.16	0.00	0.00	0.18	0.77
4366	0.52	0.00	0.00	1.36	2.43
4547	0.18	0.00	0.00	0.32	0.89

Lane Results

Lanes: Main Results for each time segment

Main results: (16:15-16:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	110.44	27.61	111.24	726.38	0.152	0.00	0.05	2.346	A
4244E	1	2	188.76	47.19	186.90	726.38	0.260	0.00	0.19	3.244	A
4244E	2	1	299.20	74.80	299.20			0.00	0.00	0.000	A
4244S	1	1	231.24	57.81	234.69	789.35	0.293	0.00	0.26	3.122	A
4366	1	1	214.51	53.63	215.31	479.30	0.448	0.00	0.58	8.806	A
4547	1	1	320.71	80.18	320.18	989.59	0.324	0.00	0.17	2.062	A

Main results: (16:30-16:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	147.35	36.84	146.02	719.76	0.205	0.05	0.12	2.829	A
4244E	1	2	233.63	58.41	237.08	719.76	0.325	0.19	0.21	3.913	A
4244E	2	1	380.71	95.18	380.97			0.00	0.00	0.008	A
4244S	1	1	288.32	72.08	289.12	773.35	0.373	0.26	0.31	4.042	A
4366	1	1	245.58	61.39	236.81	467.12	0.526	0.58	1.01	12.838	B
4547	1	1	353.63	88.41	352.83	970.49	0.364	0.17	0.28	2.688	A

Main results: (16:45-17:00)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	192.74	48.19	194.34	698.67	0.276	0.12	0.19	3.346	A
4244E	1	2	285.93	71.48	281.68	698.67	0.409	0.21	0.40	4.705	A
4244E	2	1	478.67	119.67	478.67			0.00	0.00	0.007	A
4244S	1	1	335.04	83.76	344.34	752.17	0.445	0.31	0.51	5.396	A
4366	1	1	314.87	78.72	307.17	454.45	0.693	1.01	2.02	20.372	C
4547	1	1	435.66	108.92	435.13	933.39	0.467	0.28	0.42	4.261	A

Main results: (17:00-17:15)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	161.15	40.29	164.60	695.21	0.232	0.19	0.15	3.629	A
4244E	1	2	270.53	67.63	278.50	695.21	0.389	0.40	0.31	5.129	A
4244E	2	1	431.68	107.92	431.68			0.00	0.00	0.023	A
4244S	1	1	356.28	89.07	359.20	755.05	0.472	0.51	0.57	5.657	A
4366	1	1	315.40	78.85	330.27	453.18	0.696	2.02	2.25	23.490	C
4547	1	1	435.40	108.85	430.88	925.84	0.470	0.42	0.44	4.229	A

Main results: (17:15-17:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	158.50	39.62	162.74	720.81	0.220	0.15	0.09	2.991	A
4244E	1	2	231.77	57.94	225.93	720.81	0.322	0.31	0.32	3.855	A
4244E	2	1	390.27	97.57	390.27			0.00	0.00	0.007	A
4244S	1	1	269.20	67.30	269.20	776.82	0.347	0.57	0.27	4.114	A
4366	1	1	260.71	65.18	263.10	471.92	0.552	2.25	1.09	15.186	C
4547	1	1	338.76	84.69	340.09	965.99	0.351	0.44	0.23	2.993	A

Main results: (17:30-17:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	123.19	30.80	122.65	727.89	0.169	0.09	0.11	2.458	A
4244E	1	2	199.38	49.85	201.50	727.89	0.274	0.32	0.14	3.197	A
4244E	2	1	322.57	80.64	322.57			0.00	0.00	0.000	A
4244S	1	1	247.70	61.92	248.76	785.88	0.315	0.27	0.16	3.180	A
4366	1	1	201.24	50.31	203.63	476.88	0.422	1.09	0.52	9.537	A
4547	1	1	315.13	78.78	313.01	990.08	0.318	0.23	0.18	2.162	A

Lanes: Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.18	0.08	2.346	A	A
4244E	1	2	2.60	0.17	3.244	A	A
4244E	2	1	0.00	0.00	0.000	A	A
4244S	1	1	3.13	0.21	3.122	A	A
4366	1	1	7.78	0.52	8.806	A	A
4547	1	1	2.60	0.17	2.062	A	A

Queueing Delay results: (16:30-16:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.72	0.11	2.829	A	A
4244E	1	2	3.77	0.25	3.913	A	A
4244E	2	1	0.01	0.00	0.008	A	A
4244S	1	1	4.90	0.33	4.042	A	A
4366	1	1	13.45	0.90	12.838	B	B
4547	1	1	3.96	0.26	2.688	A	A

Queueing Delay results: (16:45-17:00)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	2.52	0.17	3.346	A	A
4244E	1	2	5.45	0.36	4.705	A	A
4244E	2	1	0.01	0.00	0.007	A	A
4244S	1	1	7.87	0.52	5.396	A	A
4366	1	1	25.60	1.71	20.372	C	C
4547	1	1	7.69	0.51	4.261	A	A

Queueing Delay results: (17:00-17:15)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	2.71	0.18	3.629	A	A
4244E	1	2	6.04	0.40	5.129	A	A
4244E	2	1	0.04	0.00	0.023	A	A
4244S	1	1	8.35	0.56	5.657	A	A
4366	1	1	30.91	2.06	23.490	C	C
4547	1	1	7.78	0.52	4.229	A	A

Queueing Delay results: (17:15-17:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.80	0.12	2.991	A	A
4244E	1	2	3.71	0.25	3.855	A	A
4244E	2	1	0.01	0.00	0.007	A	A
4244S	1	1	5.01	0.33	4.114	A	A
4366	1	1	16.60	1.11	15.186	C	B
4547	1	1	4.40	0.29	2.993	A	A

Queueing Delay results: (17:30-17:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.29	0.09	2.458	A	A
4244E	1	2	2.59	0.17	3.197	A	A
4244E	2	1	0.00	0.00	0.000	A	A
4244S	1	1	3.26	0.22	3.180	A	A
4366	1	1	8.72	0.58	9.537	A	A
4547	1	1	2.71	0.18	2.162	A	A

Lanes: Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.05	0.00	0.00	0.00	-0.03
4244E	1	2	0.19	0.00	0.00	0.28	0.88
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	0.26	0.00	0.00	0.56	1.28
4366	1	1	0.58	0.00	0.00	1.62	2.61
4547	1	1	0.17	0.00	0.00	0.13	0.76

Queue Variation results: (16:30-16:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.12	0.00	0.00	0.00	0.55
4244E	1	2	0.21	0.00	0.00	0.44	1.19
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	0.31	0.00	0.00	0.81	1.61
4366	1	1	1.01	0.00	0.00	2.81	4.18
4547	1	1	0.28	0.00	0.00	0.74	1.56

Queue Variation results: (16:45-17:00)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.19	0.00	0.00	0.38	1.06
4244E	1	2	0.40	0.00	0.00	1.14	1.81
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	0.51	0.00	0.00	1.49	2.53
4366	1	1	2.02	0.00	0.49	4.70	6.18
4547	1	1	0.42	0.00	0.00	1.05	2.62

Queue Variation results: (17:00-17:15)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.15	0.00	0.00	0.00	0.69
4244E	1	2	0.31	0.00	0.00	0.86	1.55
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	0.57	0.00	0.00	1.69	2.52
4366	1	1	2.25	0.00	0.62	6.34	7.94
4547	1	1	0.44	0.00	0.00	1.13	2.21

Queue Variation results: (17:15-17:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.09	0.00	0.00	0.00	0.45
4244E	1	2	0.32	0.00	0.00	0.76	1.27
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	0.27	0.00	0.00	0.76	1.52
4366	1	1	1.09	0.00	0.00	2.74	3.85
4547	1	1	0.23	0.00	0.00	0.59	0.97

Queue Variation results: (17:30-17:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.11	0.00	0.00	0.00	0.52
4244E	1	2	0.14	0.00	0.00	0.00	0.81
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	0.16	0.00	0.00	0.18	0.77
4366	1	1	0.52	0.00	0.00	1.36	2.43
4547	1	1	0.18	0.00	0.00	0.32	0.89

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A4244_B4547_ENTRY_LANE.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A4244 B4547\2018 DF
Report generation date: 14/06/2018 17:08:17

« (Default Analysis Set) - 2023 Base, AM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Direct/Resultant Flows
» Turning Proportions
» Vehicle Mix
» Results
» Lane Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 [Entry Lane Simulation] - 2023 Base			
Arm 4244E	0.48	3.85	N/A	A
Arm 4244S	2.61	15.98	N/A	C
Arm 4366	24.56	188.95	N/A	F
Arm 4547	0.13	2.15	N/A	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM" model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:15 - 17:45
"D3 - 2023 Base, AM " model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:15 - 17:45
"D8 - 2023 Base + Dev + Seasonality, PM Aug" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 17:08:15

File summary

Title	(untitled)
Location	
Site Number	
Date	17/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

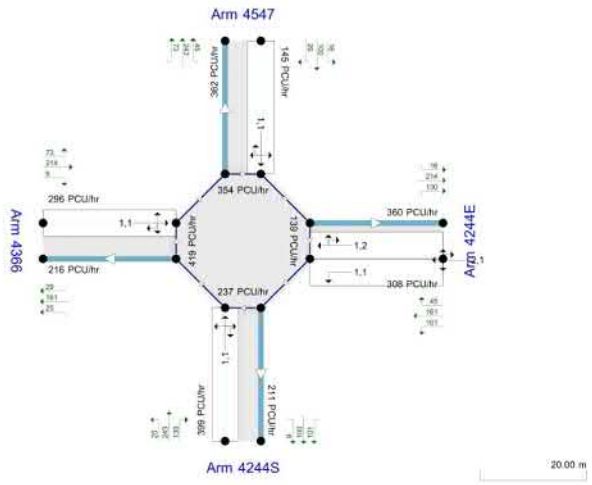
Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Entry Lane Analysis Options

Stop Criteria (%)	Random Seed	Results Refresh Speed (s)	Individual Vehicle Animation Number Of Trials	Time Step Size (s)	Last Run Random Seed	Last Run Number Of Trials
5.00	-1	3	1	10	453305545	2276



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	Entry Lane Simulation		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base, AM	2023 Base	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	A4244 B4547 B4366	Roundabout	4244E,4244S,4366,4547			55.61	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
4244E	4244E	(untitled)	
4244S	4244S	(untitled)	
4366	4366	(untitled)	
4547	4547	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
4244E	0.00	99999.00
4244S	0.00	99999.00
4366	0.00	99999.00
4547	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
4244E	3.00	10.00	18.00	25.00	48.00	40.00	
4244S	5.00	6.40	7.30	15.00	48.00	56.00	
4366	4.00	5.00	15.00	40.00	48.00	26.00	
4547	3.00	5.50	10.00	41.00	48.00	23.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
4244E		(calculated)	(calculated)	0.630	1807.798
4244S		(calculated)	(calculated)	0.565	1588.495
4366		(calculated)	(calculated)	0.593	1517.753
4547		(calculated)	(calculated)	0.573	1395.442

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
4244E	Percentage			90.00
4244S	Percentage			55.00
4366	Percentage			35.00
4547	Percentage			80.00

Entry Lane Analysis: Arm options

Arm	Lane Capacity Source	Traffic Considering Secondary Lanes (%)
4244E	Evenly split	10.00
4244S	Evenly split	10.00
4366	Evenly split	10.00
4547	Evenly split	10.00

Lanes

Arm	Lane Level	Lane	Has Limited Storage	Storage (PCU)	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
4244E	**1**	1	✓	6.00	0.00	99999.00
4244E	**1**	2	✓	6.00	0.00	99999.00
4244E	**2**	1		Infinity		
4244S	**1**	1		Infinity	0.00	99999.00
4366	**1**	1		Infinity	0.00	99999.00
4547	**1**	1		Infinity	0.00	99999.00

Entry Lane slope and intercept

Arm	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
4244E	(calculated)	(calculated)	0.315	903.899
4244E	(calculated)	(calculated)	0.315	903.899
4244S	(calculated)	(calculated)	0.565	1588.495
4366	(calculated)	(calculated)	0.593	1517.753
4547	(calculated)	(calculated)	0.573	1395.442

Lane Movements

Junction	Arm	Lane Level	Lane	Arm			
				4244E	4244S	4366	4547
1	**4244E**	**1**	**1**		✓		
1	**4244E**	**1**	**2**	✓		✓	✓
1	**4244E**	**2**	**1**	✓	✓	✓	✓
1	**4244S**	**1**	**1**	✓	✓	✓	✓
1	**4366**	**1**	**1**	✓	✓	✓	✓
1	**4547**	**1**	**1**	✓	✓	✓	✓

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
4244E	ONE HOUR	✓	411.00	100.000
4244S	ONE HOUR	✓	528.00	100.000
4366	ONE HOUR	✓	390.20	100.000
4547	ONE HOUR	✓	194.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	**4244E**	309.42	309.42		
07:45-08:00	**4244S**	397.51	397.51		
07:45-08:00	**4366**	293.76	293.76		
07:45-08:00	**4547**	146.05	146.05		
08:00-08:15	**4244E**	369.48	369.48		
08:00-08:15	**4244S**	474.66	474.66		
08:00-08:15	**4366**	350.78	350.78		
08:00-08:15	**4547**	174.40	174.40		
08:15-08:30	**4244E**	452.52	452.52		
08:15-08:30	**4244S**	581.34	581.34		
08:15-08:30	**4366**	429.62	429.62		
08:15-08:30	**4547**	213.60	213.60		
08:30-08:45	**4244E**	452.52	452.52		
08:30-08:45	**4244S**	581.34	581.34		
08:30-08:45	**4366**	429.62	429.62		
08:30-08:45	**4547**	213.60	213.60		
08:45-09:00	**4244E**	369.48	369.48		
08:45-09:00	**4244S**	474.66	474.66		
08:45-09:00	**4366**	350.78	350.78		
08:45-09:00	**4547**	174.40	174.40		
09:00-09:15	**4244E**	309.42	309.42		
09:00-09:15	**4244S**	397.51	397.51		
09:00-09:15	**4366**	293.76	293.76		
09:00-09:15	**4547**	146.05	146.05		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.000	135.000	214.000	62.000
	4244S	177.000	0.000	32.000	319.000
	4366	282.000	12.200	0.000	96.000
	4547	22.000	133.000	39.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.00	0.33	0.52	0.15
	4244S	0.34	0.00	0.06	0.60
	4366	0.72	0.03	0.00	0.25
	4547	0.11	0.69	0.20	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	1.000	1.000	1.000	1.000
	4244S	1.000	1.000	1.000	1.000
	4366	1.000	1.000	1.000	1.000
	4547	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.0	0.0	0.0	0.0
	4244S	0.0	0.0	0.0	0.0
	4366	0.0	0.0	0.0	0.0
	4547	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)
4244E	3.85	0.48	1.97	A	376.00	564.00	30.69	3.26	0.34
4244S	15.98	2.61	9.43	C	484.96	727.44	126.68	10.45	1.41
4366	188.95	24.56	53.39	F	361.55	542.32	902.60	99.86	10.03
4547	2.15	0.13	0.67	A	178.14	267.21	8.06	1.81	0.09

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	307.75	76.94	307.75	360.29	138.82	0.00	0.23	2.629	A
4244S	398.41	99.60	398.67	211.32	236.68	0.00	0.59	5.418	A
4366	298.60	74.65	296.28	215.93	419.42	0.00	1.76	18.602	C
4547	144.81	36.20	145.31	361.90	353.80	0.00	0.05	1.371	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	366.56	91.64	366.56	429.52	170.19	0.00	0.31	3.012	A
4244S	465.98	116.49	466.42	254.31	281.63	0.00	1.07	8.078	A
4366	351.04	87.76	350.98	255.82	492.23	0.00	3.79	35.319	E
4547	180.42	45.11	179.82	423.32	419.89	0.00	0.09	1.719	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	450.55	112.64	450.69	508.31	199.85	0.31	0.48	3.847	A
4244S	582.73	145.68	579.28	306.64	342.36	1.07	2.61	14.915	B
4366	433.68	108.42	398.91	311.10	610.54	3.79	15.73	100.224	F
4547	211.58	52.90	211.90	513.19	496.27	0.09	0.12	2.090	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	452.66	113.17	452.69	504.49	200.04	0.48	0.44	3.841	A
4244S	582.23	145.56	580.65	309.41	345.61	2.61	2.61	15.980	C
4366	433.31	108.33	395.88	312.10	614.16	15.73	24.56	188.954	F
4547	210.84	52.71	210.90	516.41	493.63	0.12	0.13	2.147	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	370.52	92.63	370.41	459.91	165.08	0.44	0.30	3.097	A
4244S	475.41	118.85	471.72	250.12	285.42	2.61	1.15	8.824	A
4366	355.65	88.91	387.86	260.06	497.08	24.56	13.18	163.129	F
4547	174.86	43.71	174.94	434.89	450.05	0.13	0.09	1.825	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	307.93	76.98	307.93	372.02	138.40	0.30	0.23	2.616	A
4244S	405.00	101.25	400.97	212.06	234.81	1.15	0.66	5.617	A
4366	296.99	74.25	306.09	215.67	420.11	13.18	2.99	56.786	F
4547	146.34	36.58	145.57	361.34	364.85	0.09	0.06	1.430	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	3.38	0.23	2.629	A	A
4244S	8.94	0.60	5.418	A	A
4366	22.26	1.48	18.602	C	B
4547	0.83	0.06	1.371	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	4.62	0.31	3.012	A	A
4244S	15.90	1.06	8.078	A	A
4366	49.72	3.31	35.319	E	D
4547	1.25	0.08	1.719	A	A

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	7.23	0.48	3.847	A	A
4244S	35.51	2.37	14.915	B	B
4366	154.42	10.29	100.224	F	F
4547	1.86	0.12	2.090	A	A

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	7.26	0.48	3.841	A	A
4244S	38.73	2.58	15.980	C	B
4366	304.41	20.29	188.954	F	F
4547	1.91	0.13	2.147	A	A

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	4.77	0.32	3.097	A	A
4244S	18.03	1.20	8.824	A	A
4366	274.69	18.31	163.129	F	F
4547	1.33	0.09	1.825	A	A

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	3.42	0.23	2.616	A	A
4244S	9.57	0.64	5.617	A	A
4366	97.10	6.47	56.786	F	E
4547	0.88	0.06	1.430	A	A

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.23	0.00	0.00	0.54	0.99
4244S	0.59	0.00	0.00	1.67	2.71
4366	1.76	0.00	0.38	4.42	6.15
4547	0.05	0.00	0.00	0.00	0.00

Queue Variation results: (08:00-08:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.31	0.00	0.00	0.80	1.57
4244S	1.07	0.00	0.00	2.97	4.43
4366	3.79	0.00	1.95	9.33	12.19
4547	0.09	0.00	0.00	0.00	0.26

Queue Variation results: (08:15-08:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.48	0.00	0.00	1.31	1.97
4244S	2.61	0.00	0.86	6.74	9.07
4366	15.73	0.44	13.27	30.68	36.10
4547	0.12	0.00	0.00	0.00	0.62

Queue Variation results: (08:30-08:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.44	0.00	0.00	1.20	1.90
4244S	2.61	0.00	0.85	6.94	9.43
4366	24.56	1.76	22.04	46.13	53.39
4547	0.13	0.00	0.00	0.00	0.67

Queue Variation results: (08:45-09:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.30	0.00	0.00	0.73	1.39
4244S	1.15	0.00	0.00	3.15	4.48
4366	13.18	0.00	7.32	34.29	41.74
4547	0.09	0.00	0.00	0.00	0.35

Queue Variation results: (09:00-09:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.23	0.00	0.00	0.56	0.98
4244S	0.66	0.00	0.00	1.89	2.84
4366	2.99	0.00	0.56	7.01	12.66
4547	0.06	0.00	0.00	0.00	0.00

Lane Results

Lanes: Main Results for each time segment

Main results: (07:45-08:00)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	101.41	25.35	101.94	774.13	0.131	0.00	0.06	1.958	A
4244E	1	2	206.34	51.58	207.23	774.13	0.267	0.00	0.17	2.954	A
4244E	2	1	307.75	76.94	307.75			0.00	0.00	0.001	A
4244S	1	1	398.41	99.60	398.67	800.19	0.498	0.00	0.59	5.418	A
4366	1	1	298.60	74.65	296.28	444.15	0.672	0.00	1.76	18.602	C
4547	1	1	144.81	36.20	145.31	954.23	0.152	0.00	0.05	1.371	A

Main results: (08:00-08:15)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	119.87	29.97	120.13	765.23	0.157	0.06	0.07	2.190	A
4244E	1	2	246.70	61.67	245.62	765.23	0.322	0.17	0.24	3.412	A
4244E	2	1	366.56	91.64	366.56			0.00	0.00	0.003	A
4244S	1	1	465.98	116.49	466.42	786.23	0.593	0.59	1.07	8.078	A
4366	1	1	351.04	87.76	350.98	429.04	0.818	1.76	3.79	35.319	E
4547	1	1	180.42	45.11	179.82	923.94	0.195	0.05	0.09	1.719	A

Main results: (08:15-08:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	151.71	37.93	150.79	756.82	0.200	0.07	0.11	2.525	A
4244E	1	2	298.97	74.74	298.37	756.82	0.395	0.24	0.37	4.471	A
4244E	2	1	450.55	112.64	450.69			0.00	0.00	0.017	A
4244S	1	1	582.73	145.68	579.28	767.37	0.759	1.07	2.61	14.915	B
4366	1	1	433.68	108.42	398.91	404.48	1.072	3.79	15.73	100.224	F
4547	1	1	211.58	52.90	211.90	888.95	0.238	0.09	0.12	2.090	A

Main results: (08:30-08:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	150.29	37.57	150.45	756.77	0.199	0.11	0.11	2.526	A
4244E	1	2	302.40	75.60	304.53	756.77	0.400	0.37	0.33	4.463	A
4244E	2	1	452.66	113.17	452.69			0.00	0.00	0.015	A
4244S	1	1	582.23	145.56	580.65	766.36	0.760	2.61	2.61	15.980	C
4366	1	1	433.31	108.33	395.88	403.73	1.073	15.73	24.56	188.954	F
4547	1	1	210.84	52.71	210.90	890.16	0.237	0.12	0.13	2.147	A

Main results: (08:45-09:00)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	119.55	29.89	120.00	766.69	0.156	0.11	0.07	2.187	A
4244E	1	2	250.86	62.72	250.47	766.69	0.327	0.33	0.23	3.531	A
4244E	2	1	370.52	92.63	370.41			0.00	0.00	0.006	A
4244S	1	1	475.41	118.85	471.72	785.05	0.606	2.61	1.15	8.824	A
4366	1	1	355.65	88.91	387.86	428.03	0.831	24.56	13.18	163.129	F
4547	1	1	174.86	43.71	174.94	910.13	0.192	0.13	0.09	1.825	A

Main results: (09:00-09:15)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	103.39	25.85	103.08	774.25	0.134	0.07	0.06	1.994	A
4244E	1	2	204.54	51.14	205.39	774.25	0.264	0.23	0.16	2.921	A
4244E	2	1	307.93	76.98	307.93			0.00	0.00	0.001	A
4244S	1	1	405.00	101.25	400.97	800.77	0.506	1.15	0.66	5.617	A
4366	1	1	296.99	74.25	306.09	444.01	0.669	13.18	2.99	56.786	F
4547	1	1	146.34	36.58	145.57	949.17	0.154	0.09	0.06	1.430	A

Lanes: Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	0.82	0.05	1.958	A	A
4244E	1	2	2.55	0.17	2.954	A	A
4244E	2	1	0.00	0.00	0.001	A	A
4244S	1	1	8.94	0.60	5.418	A	A
4366	1	1	22.26	1.48	18.602	C	B
4547	1	1	0.83	0.06	1.371	A	A

Queueing Delay results: (08:00-08:15)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.11	0.07	2.190	A	A
4244E	1	2	3.51	0.23	3.412	A	A
4244E	2	1	0.00	0.00	0.003	A	A
4244S	1	1	15.90	1.06	8.078	A	A
4366	1	1	49.72	3.31	35.319	E	D
4547	1	1	1.25	0.08	1.719	A	A

Queueing Delay results: (08:15-08:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.56	0.10	2.525	A	A
4244E	1	2	5.64	0.38	4.471	A	A
4244E	2	1	0.03	0.00	0.017	A	A
4244S	1	1	35.51	2.37	14.915	B	B
4366	1	1	154.42	10.29	100.224	F	F
4547	1	1	1.86	0.12	2.090	A	A

Queueing Delay results: (08:30-08:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.57	0.10	2.526	A	A
4244E	1	2	5.66	0.38	4.463	A	A
4244E	2	1	0.03	0.00	0.015	A	A
4244S	1	1	38.73	2.58	15.980	C	B
4366	1	1	304.41	20.29	188.954	F	F
4547	1	1	1.91	0.13	2.147	A	A

Queueing Delay results: (08:45-09:00)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.10	0.07	2.187	A	A
4244E	1	2	3.66	0.24	3.531	A	A
4244E	2	1	0.01	0.00	0.006	A	A
4244S	1	1	18.03	1.20	8.824	A	A
4366	1	1	274.69	18.31	163.129	F	F
4547	1	1	1.33	0.09	1.825	A	A

Queueing Delay results: (09:00-09:15)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	0.86	0.06	1.994	A	A
4244E	1	2	2.56	0.17	2.921	A	A
4244E	2	1	0.00	0.00	0.001	A	A
4244S	1	1	9.57	0.64	5.617	A	A
4366	1	1	97.10	6.47	56.786	F	E
4547	1	1	0.88	0.06	1.430	A	A

Lanes: Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.06	0.00	0.00	0.00	0.00
4244E	1	2	0.17	0.00	0.00	0.21	0.84
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	0.59	0.00	0.00	1.67	2.71
4366	1	1	1.76	0.00	0.38	4.42	6.15
4547	1	1	0.05	0.00	0.00	0.00	0.00

Queue Variation results: (08:00-08:15)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.07	0.00	0.00	0.00	0.07
4244E	1	2	0.24	0.00	0.00	0.57	1.26
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	1.07	0.00	0.00	2.97	4.43
4366	1	1	3.79	0.00	1.95	9.33	12.19
4547	1	1	0.09	0.00	0.00	0.00	0.26

Queue Variation results: (08:15-08:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.11	0.00	0.00	0.00	0.53
4244E	1	2	0.37	0.00	0.00	0.98	1.78
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	2.61	0.00	0.86	6.74	9.07
4366	1	1	15.73	0.44	13.27	30.68	36.10
4547	1	1	0.12	0.00	0.00	0.00	0.62

Queue Variation results: (08:30-08:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.11	0.00	0.00	0.00	0.53
4244E	1	2	0.33	0.00	0.00	0.88	1.67
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	2.61	0.00	0.85	6.94	9.43
4366	1	1	24.56	1.76	22.04	46.13	53.39
4547	1	1	0.13	0.00	0.00	0.00	0.67

Queue Variation results: (08:45-09:00)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.07	0.00	0.00	0.00	0.08
4244E	1	2	0.23	0.00	0.00	0.51	1.06
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	1.15	0.00	0.00	3.15	4.48
4366	1	1	13.18	0.00	7.32	34.29	41.74
4547	1	1	0.09	0.00	0.00	0.00	0.35

Queue Variation results: (09:00-09:15)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.06	0.00	0.00	0.00	0.09
4244E	1	2	0.16	0.00	0.00	0.22	0.83
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	0.66	0.00	0.00	1.89	2.84
4366	1	1	2.99	0.00	0.56	7.01	12.66
4547	1	1	0.06	0.00	0.00	0.00	0.00

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A4244_B4547_ENTRY_LANE.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A4244 B4547\2018 DF
Report generation date: 14/06/2018 17:13:12

« (Default Analysis Set) - 2023 Base, PM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Direct/Resultant Flows
» Turning Proportions
» Vehicle Mix
» Results
» Lane Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 [Entry Lane Simulation] - 2023 Base			
Arm 4244E	0.73	5.07	N/A	A
Arm 4244S	0.63	6.52	N/A	A
Arm 4366	2.71	26.37	N/A	D
Arm 4547	0.70	4.64	N/A	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM" model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:15 - 17:45
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM " model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:15 - 17:45
"D8 - 2023 Base + Dev + Seasonality, PM Aug" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 17:13:10

File summary

Title	(untitled)
Location	
Site Number	
Date	17/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

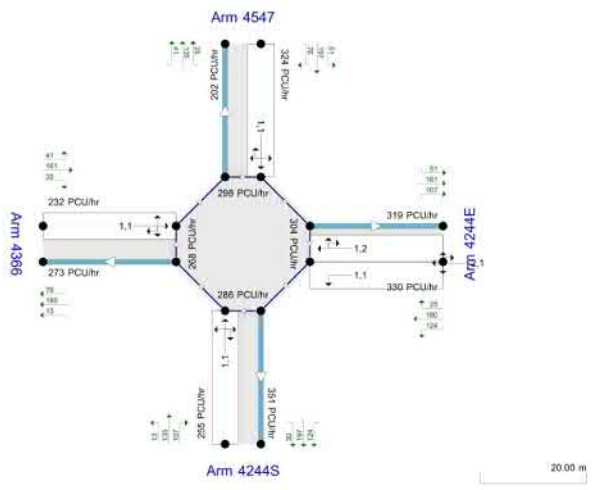
Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Entry Lane Analysis Options

Stop Criteria (%)	Random Seed	Results Refresh Speed (s)	Individual Vehicle Animation Number Of Trials	Time Step Size (s)	Last Run Random Seed	Last Run Number Of Trials
5.00	-1	3	1	10	74213251	254



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	Entry Lane Simulation		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base, PM	2023 Base	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	A4244 B4547 B4366	Roundabout	4244E,4244S,4366,4547			9.56	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
4244E	4244E	(untitled)	
4244S	4244S	(untitled)	
4366	4366	(untitled)	
4547	4547	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
4244E	0.00	99999.00
4244S	0.00	99999.00
4366	0.00	99999.00
4547	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
4244E	3.00	10.00	18.00	25.00	48.00	40.00	
4244S	5.00	6.40	7.30	15.00	48.00	56.00	
4366	4.00	5.00	15.00	40.00	48.00	26.00	
4547	3.00	5.50	10.00	41.00	48.00	23.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
4244E		(calculated)	(calculated)	0.630	1807.798
4244S		(calculated)	(calculated)	0.565	1588.495
4366		(calculated)	(calculated)	0.593	1517.753
4547		(calculated)	(calculated)	0.573	1395.442

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
4244E	Percentage			90.00
4244S	Percentage			55.00
4366	Percentage			35.00
4547	Percentage			80.00

Entry Lane Analysis: Arm options

Arm	Lane Capacity Source	Traffic Considering Secondary Lanes (%)
4244E	Evenly split	10.00
4244S	Evenly split	10.00
4366	Evenly split	10.00
4547	Evenly split	10.00

Lanes

Arm	Lane Level	Lane	Has Limited Storage	Storage (PCU)	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
4244E	1	1	✓	6.00	0.00	99999.00
4244E	1	2	✓	6.00	0.00	99999.00
4244E	2	1		Infinity		
4244S	1	1		Infinity	0.00	99999.00
4366	1	1		Infinity	0.00	99999.00
4547	1	1		Infinity	0.00	99999.00

Entry Lane slope and intercept

Arm	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
4244E	(calculated)	(calculated)	0.315	903.899
4244E	(calculated)	(calculated)	0.315	903.899
4244S	(calculated)	(calculated)	0.565	1588.495
4366	(calculated)	(calculated)	0.593	1517.753
4547	(calculated)	(calculated)	0.573	1395.442

Lane Movements

Junction	Arm	Lane Level	Lane	Arm			
				4244E	4244S	4366	4547
1	4244E	1	1		✓		
1	4244E	1	2	✓		✓	✓
1	4244E	2	1	✓	✓	✓	✓
1	4244S	1	1	✓	✓	✓	✓
1	4366	1	1	✓	✓	✓	✓
1	4547	1	1	✓	✓	✓	✓

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
4244E	ONE HOUR	✓	448.00	100.000
4244S	ONE HOUR	✓	342.00	100.000
4366	ONE HOUR	✓	302.00	100.000
4547	ONE HOUR	✓	420.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	4244E	337.28	337.28		
16:15-16:30	4244S	257.48	257.48		
16:15-16:30	4366	227.36	227.36		
16:15-16:30	4547	316.20	316.20		
16:30-16:45	4244E	402.74	402.74		
16:30-16:45	4244S	307.45	307.45		
16:30-16:45	4366	271.49	271.49		
16:30-16:45	4547	377.57	377.57		
16:45-17:00	4244E	493.26	493.26		
16:45-17:00	4244S	376.55	376.55		
16:45-17:00	4366	332.51	332.51		
16:45-17:00	4547	462.43	462.43		
17:00-17:15	4244E	493.26	493.26		
17:00-17:15	4244S	376.55	376.55		
17:00-17:15	4366	332.51	332.51		
17:00-17:15	4547	462.43	462.43		
17:15-17:30	4244E	402.74	402.74		
17:15-17:30	4244S	307.45	307.45		
17:15-17:30	4366	271.49	271.49		
17:15-17:30	4547	377.57	377.57		
17:30-17:45	4244E	337.28	337.28		
17:30-17:45	4244S	257.48	257.48		
17:30-17:45	4366	227.36	227.36		
17:30-17:45	4547	316.20	316.20		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.000	173.000	242.000	33.000
	4244S	151.000	0.000	14.000	177.000
	4366	211.000	37.000	0.000	54.000
	4547	60.000	255.000	105.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.00	0.39	0.54	0.07
	4244S	0.44	0.00	0.04	0.52
	4366	0.70	0.12	0.00	0.18
	4547	0.14	0.61	0.25	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	1.000	1.000	1.000	1.000
	4244S	1.000	1.000	1.000	1.000
	4366	1.000	1.000	1.000	1.000
	4547	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.0	0.0	0.0	0.0
	4244S	0.0	0.0	0.0	0.0
	4366	0.0	0.0	0.0	0.0
	4547	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)
4244E	5.07	0.73	2.72	A	407.87	611.81	42.36	4.15	0.47
4244S	6.52	0.63	2.83	A	306.06	459.09	38.80	5.07	0.43
4366	26.37	2.71	9.10	D	279.02	418.52	124.15	17.80	1.38
4547	4.64	0.70	3.22	A	390.43	585.65	34.26	3.51	0.38

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	329.53	82.38	329.53	318.66	303.78	0.00	0.30	3.144	A
4244S	258.66	64.67	254.88	350.79	286.06	0.00	0.31	3.302	A
4366	232.44	58.11	232.20	272.83	268.11	0.00	0.61	9.654	A
4547	324.33	81.08	324.09	201.97	298.35	0.00	0.20	2.398	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	394.49	98.62	394.49	364.96	350.31	0.00	0.45	3.636	A
4244S	296.46	74.11	285.83	413.39	331.42	0.00	0.42	4.534	A
4366	266.93	66.73	263.86	313.23	304.02	0.00	1.06	14.295	B
4547	368.50	92.13	371.34	223.94	343.94	0.00	0.30	3.207	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	485.20	121.30	484.72	462.76	443.15	0.45	0.69	5.068	A
4244S	364.02	91.00	373.46	516.14	412.91	0.42	0.54	6.272	A
4366	331.89	82.97	325.75	394.25	392.13	1.06	2.71	24.897	C
4547	480.00	120.00	478.58	290.55	427.32	0.30	0.70	4.587	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	497.01	124.25	497.48	478.35	440.55	0.69	0.73	5.012	A
4244S	369.92	92.48	370.16	510.24	419.76	0.54	0.63	6.519	A
4366	337.56	84.39	350.08	396.14	393.78	2.71	2.20	26.368	D
4547	472.91	118.23	471.02	295.98	447.87	0.70	0.65	4.642	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	405.12	101.28	404.88	382.68	366.38	0.73	0.40	3.964	A
4244S	299.06	74.76	298.58	418.82	354.57	0.63	0.32	4.458	A
4366	271.89	67.97	277.32	329.29	323.86	2.20	1.19	15.808	C
4547	386.46	96.61	385.51	237.64	363.54	0.65	0.34	3.255	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	335.91	83.98	335.91	312.99	293.86	0.40	0.27	3.188	A
4244S	248.27	62.07	249.45	344.41	288.19	0.32	0.22	3.435	A
4366	233.39	58.35	227.48	272.60	265.04	1.19	0.65	10.184	B
4547	310.39	77.60	310.39	196.06	296.46	0.34	0.21	2.393	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	4.35	0.29	3.144	A	A
4244S	3.50	0.23	3.302	A	A
4366	9.00	0.60	9.654	A	A
4547	3.14	0.21	2.398	A	A

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	6.08	0.41	3.636	A	A
4244S	5.80	0.39	4.534	A	A
4366	16.10	1.07	14.295	B	B
4547	5.03	0.34	3.207	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	10.36	0.69	5.068	A	A
4244S	9.81	0.65	6.272	A	A
4366	33.68	2.25	24.897	C	C
4547	8.81	0.59	4.587	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	10.34	0.69	5.012	A	A
4244S	10.21	0.68	6.519	A	A
4366	36.97	2.46	26.368	D	C
4547	8.92	0.59	4.642	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	6.70	0.45	3.964	A	A
4244S	5.77	0.38	4.458	A	A
4366	18.54	1.24	15.808	C	B
4547	5.15	0.34	3.255	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	4.53	0.30	3.188	A	A
4244S	3.71	0.25	3.435	A	A
4366	9.87	0.66	10.184	B	B
4547	3.20	0.21	2.393	A	A

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.30	0.00	0.00	0.81	1.49
4244S	0.31	0.00	0.00	0.93	1.57
4366	0.61	0.00	0.00	1.77	2.59
4547	0.20	0.00	0.00	0.26	0.96

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.45	0.00	0.00	0.95	1.79
4244S	0.42	0.00	0.00	0.96	2.29
4366	1.06	0.00	0.00	2.95	4.61
4547	0.30	0.00	0.00	0.81	1.59

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.69	0.00	0.00	1.85	2.72
4244S	0.54	0.00	0.00	1.44	2.72
4366	2.71	0.00	1.10	6.40	9.10
4547	0.70	0.00	0.00	1.90	2.86

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.73	0.00	0.00	1.80	2.48
4244S	0.63	0.00	0.00	1.79	2.83
4366	2.20	0.00	0.76	5.77	7.55
4547	0.65	0.00	0.00	1.84	3.22

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.40	0.00	0.00	0.98	1.72
4244S	0.32	0.00	0.00	0.92	1.52
4366	1.19	0.00	0.00	3.60	4.79
4547	0.34	0.00	0.00	0.89	1.62

Queue Variation results: (17:30-17:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.27	0.00	0.00	0.73	1.31
4244S	0.22	0.00	0.00	0.41	1.04
4366	0.65	0.00	0.00	1.65	2.41
4547	0.21	0.00	0.00	0.41	1.03

Lane Results

Lanes: Main Results for each time segment

Main results: (16:15-16:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	124.25	31.06	122.83	727.34	0.171	0.00	0.12	2.560	A
4244E	1	2	205.28	51.32	210.24	727.34	0.282	0.00	0.18	3.502	A
4244E	2	1	329.53	82.38	329.53			0.00	0.00	0.004	A
4244S	1	1	258.66	64.67	254.88	784.85	0.330	0.00	0.31	3.302	A
4366	1	1	232.44	58.11	232.20	475.56	0.489	0.00	0.61	9.654	A
4547	1	1	324.33	81.08	324.09	979.64	0.331	0.00	0.20	2.398	A

Main results: (16:30-16:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	163.70	40.93	161.34	714.14	0.229	0.12	0.19	2.907	A
4244E	1	2	230.79	57.70	233.15	714.14	0.323	0.18	0.26	4.077	A
4244E	2	1	394.49	98.62	394.49			0.00	0.00	0.006	A
4244S	1	1	296.46	74.11	285.83	770.77	0.385	0.31	0.42	4.534	A
4366	1	1	266.93	66.73	263.86	468.11	0.570	0.61	1.06	14.295	B
4547	1	1	368.50	92.13	371.34	958.75	0.384	0.20	0.30	3.207	A

Main results: (16:45-17:00)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	184.72	46.18	191.34	687.81	0.269	0.19	0.15	3.865	A
4244E	1	2	300.00	75.00	294.57	687.81	0.436	0.26	0.52	5.764	A
4244E	2	1	485.20	121.30	484.72			0.00	0.01	0.029	A
4244S	1	1	364.02	91.00	373.46	745.47	0.488	0.42	0.54	6.272	A
4366	1	1	331.89	82.97	325.75	449.82	0.738	1.06	2.71	24.897	C
4547	1	1	480.00	120.00	478.58	920.54	0.521	0.30	0.70	4.587	A

Main results: (17:00-17:15)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	195.59	48.90	191.57	688.55	0.284	0.15	0.19	3.728	A
4244E	1	2	301.89	75.47	297.87	688.55	0.438	0.52	0.54	5.777	A
4244E	2	1	497.01	124.25	497.48			0.01	0.00	0.031	A
4244S	1	1	369.92	92.48	370.16	743.34	0.498	0.54	0.63	6.519	A
4366	1	1	337.56	84.39	350.08	449.48	0.751	2.71	2.20	26.368	D
4547	1	1	472.91	118.23	471.02	911.12	0.519	0.70	0.65	4.642	A

Main results: (17:15-17:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	144.80	36.20	145.28	709.59	0.204	0.19	0.11	2.985	A
4244E	1	2	260.08	65.02	261.73	709.59	0.367	0.54	0.29	4.539	A
4244E	2	1	405.12	101.28	404.88			0.00	0.00	0.019	A
4244S	1	1	299.06	74.76	298.58	763.58	0.392	0.63	0.32	4.458	A
4366	1	1	271.89	67.97	277.32	463.99	0.586	2.20	1.19	15.808	C
4547	1	1	386.46	96.61	385.51	949.77	0.407	0.65	0.34	3.255	A

Main results: (17:30-17:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	131.34	32.83	133.23	730.16	0.180	0.11	0.10	2.508	A
4244E	1	2	204.57	51.14	205.51	730.16	0.280	0.29	0.17	3.604	A
4244E	2	1	335.91	83.98	335.91			0.00	0.00	0.003	A
4244S	1	1	248.27	62.07	249.45	784.19	0.317	0.32	0.22	3.435	A
4366	1	1	233.39	58.35	227.48	476.20	0.490	1.19	0.65	10.184	B
4547	1	1	310.39	77.60	310.39	980.51	0.317	0.34	0.21	2.393	A

Lanes: Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.36	0.09	2.560	A	A
4244E	1	2	2.99	0.20	3.502	A	A
4244E	2	1	0.01	0.00	0.004	A	A
4244S	1	1	3.50	0.23	3.302	A	A
4366	1	1	9.00	0.60	9.654	A	A
4547	1	1	3.14	0.21	2.398	A	A

Queueing Delay results: (16:30-16:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.85	0.12	2.907	A	A
4244E	1	2	4.22	0.28	4.077	A	A
4244E	2	1	0.01	0.00	0.006	A	A
4244S	1	1	5.80	0.39	4.534	A	A
4366	1	1	16.10	1.07	14.295	B	B
4547	1	1	5.03	0.34	3.207	A	A

Queueing Delay results: (16:45-17:00)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	3.03	0.20	3.865	A	A
4244E	1	2	7.26	0.48	5.764	A	A
4244E	2	1	0.06	0.00	0.029	A	A
4244S	1	1	9.81	0.65	6.272	A	A
4366	1	1	33.68	2.25	24.897	C	C
4547	1	1	8.81	0.59	4.587	A	A

Queueing Delay results: (17:00-17:15)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	2.98	0.20	3.728	A	A
4244E	1	2	7.30	0.49	5.777	A	A
4244E	2	1	0.06	0.00	0.031	A	A
4244S	1	1	10.21	0.68	6.519	A	A
4366	1	1	36.97	2.46	26.368	D	C
4547	1	1	8.92	0.59	4.642	A	A

Queueing Delay results: (17:15-17:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.93	0.13	2.985	A	A
4244E	1	2	4.74	0.32	4.539	A	A
4244E	2	1	0.03	0.00	0.019	A	A
4244S	1	1	5.77	0.38	4.458	A	A
4366	1	1	18.54	1.24	15.808	C	B
4547	1	1	5.15	0.34	3.255	A	A

Queueing Delay results: (17:30-17:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.36	0.09	2.508	A	A
4244E	1	2	3.16	0.21	3.604	A	A
4244E	2	1	0.00	0.00	0.003	A	A
4244S	1	1	3.71	0.25	3.435	A	A
4366	1	1	9.87	0.66	10.184	B	B
4547	1	1	3.20	0.21	2.393	A	A

Lanes: Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.12	0.00	0.00	0.00	0.64
4244E	1	2	0.18	0.00	0.00	0.33	0.88
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	0.31	0.00	0.00	0.93	1.57
4366	1	1	0.61	0.00	0.00	1.77	2.59
4547	1	1	0.20	0.00	0.00	0.26	0.96

Queue Variation results: (16:30-16:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.19	0.00	0.00	0.31	0.92
4244E	1	2	0.26	0.00	0.00	0.57	1.05
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	0.42	0.00	0.00	0.96	2.29
4366	1	1	1.06	0.00	0.00	2.95	4.61
4547	1	1	0.30	0.00	0.00	0.81	1.59

Queue Variation results: (16:45-17:00)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.15	0.00	0.00	0.03	0.74
4244E	1	2	0.52	0.00	0.00	1.51	2.48
4244E	2	1	0.01	0.00	0.00	0.00	0.00
4244S	1	1	0.54	0.00	0.00	1.44	2.72
4366	1	1	2.71	0.00	1.10	6.40	9.10
4547	1	1	0.70	0.00	0.00	1.90	2.86

Queue Variation results: (17:00-17:15)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.19	0.00	0.00	0.39	0.97
4244E	1	2	0.54	0.00	0.00	1.53	2.13
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	0.63	0.00	0.00	1.79	2.83
4366	1	1	2.20	0.00	0.78	5.77	7.55
4547	1	1	0.65	0.00	0.00	1.84	3.22

Queue Variation results: (17:15-17:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.11	0.00	0.00	0.00	0.52
4244E	1	2	0.29	0.00	0.00	0.74	1.44
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	0.32	0.00	0.00	0.92	1.52
4366	1	1	1.19	0.00	0.00	3.60	4.79
4547	1	1	0.34	0.00	0.00	0.89	1.62

Queue Variation results: (17:30-17:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.10	0.00	0.00	0.00	0.52
4244E	1	2	0.17	0.00	0.00	0.20	0.91
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	0.22	0.00	0.00	0.41	1.04
4366	1	1	0.65	0.00	0.00	1.65	2.41
4547	1	1	0.21	0.00	0.00	0.41	1.03

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A4244_B4547_ENTRY_LANE.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A4244 B4547\2018 DF
Report generation date: 14/06/2018 17:14:51

« (Default Analysis Set) - 2023 Base + Dev, AM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Direct/Resultant Flows
» Turning Proportions
» Vehicle Mix
» Results
» Lane Results

Summary of junction performance

There are warnings associated with this model run - see the 'Data Errors and Warnings' tables.

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 [Entry Lane Simulation] - 2023 Base + Dev			
Arm 4244E	1.40	7.99	N/A	A
Arm 4244S	4.13	24.76	N/A	C
Arm 4366	40.00	331.06	N/A	F
Arm 4547	0.43	3.90	N/A	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM" model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:15 - 17:45
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM " model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:15 - 17:45
"D8 - 2023 Base + Dev + Seasonality, PM Aug" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 17:14:49

File summary

Title	(untitled)
Location	
Site Number	
Date	17/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

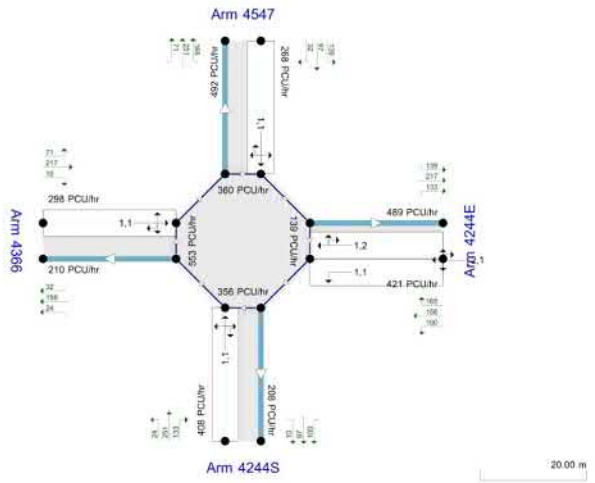
Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Entry Lane Analysis Options

Stop Criteria (%)	Random Seed	Results Refresh Speed (s)	Individual Vehicle Animation Number Of Trials	Time Step Size (s)	Last Run Random Seed	Last Run Number Of Trials
5.00	-1	3	1	10	997553251	648



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Last Run	Entry Lane Analysis	Arm 4366 - Entry Lane Analysis	Arm 4366: Queue at end of modelled period is greater than 10 PCU. Delay for these vehicles has NOT been included in calculations. You may want to increase the modelled period to take account of these vehicles.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	Entry Lane Simulation		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base + Dev, AM	2023 Base + Dev	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	A4244 B4547 B4366	Roundabout	4244E,4244S,4366,4547			80.92	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
4244E	4244E	(untitled)	
4244S	4244S	(untitled)	
4366	4366	(untitled)	
4547	4547	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
4244E	0.00	99999.00
4244S	0.00	99999.00
4366	0.00	99999.00
4547	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
4244E	3.00	10.00	18.00	25.00	48.00	40.00	
4244S	5.00	6.40	7.30	15.00	48.00	56.00	
4366	4.00	5.00	15.00	40.00	48.00	26.00	
4547	3.00	5.50	10.00	41.00	48.00	23.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
4244E		(calculated)	(calculated)	0.630	1807.798
4244S		(calculated)	(calculated)	0.565	1588.495
4366		(calculated)	(calculated)	0.593	1517.753
4547		(calculated)	(calculated)	0.573	1395.442

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
4244E	Percentage			90.00
4244S	Percentage			55.00
4366	Percentage			35.00
4547	Percentage			80.00

Entry Lane Analysis: Arm options

Arm	Lane Capacity Source	Traffic Considering Secondary Lanes (%)
4244E	Evenly split	10.00
4244S	Evenly split	10.00
4366	Evenly split	10.00
4547	Evenly split	10.00

Lanes

Arm	Lane Level	Lane	Has Limited Storage	Storage (PCU)	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
4244E	**1**	1	✓	6.00	0.00	99999.00
4244E	**1**	2	✓	6.00	0.00	99999.00
4244E	**2**	1		Infinity		
4244S	**1**	1		Infinity	0.00	99999.00
4366	**1**	1		Infinity	0.00	99999.00
4547	**1**	1		Infinity	0.00	99999.00

Entry Lane slope and intercept

Arm	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
4244E	(calculated)	(calculated)	0.315	903.899
4244E	(calculated)	(calculated)	0.315	903.899
4244S	(calculated)	(calculated)	0.565	1588.495
4366	(calculated)	(calculated)	0.593	1517.753
4547	(calculated)	(calculated)	0.573	1395.442

Lane Movements

Junction	Arm	Lane Level	Lane	Arm			
				4244E	4244S	4366	4547
1	**4244E**	**1**	**1**		✓		
1	**4244E**	**1**	**2**	✓		✓	✓
1	**4244E**	**2**	**1**	✓	✓	✓	✓
1	**4244S**	**1**	**1**	✓	✓	✓	✓
1	**4366**	**1**	**1**	✓	✓	✓	✓
1	**4547**	**1**	**1**	✓	✓	✓	✓

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
4244E	ONE HOUR	✓	570.00	100.000
4244S	ONE HOUR	✓	528.00	100.000
4366	ONE HOUR	✓	390.20	100.000
4547	ONE HOUR	✓	354.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	**4244E**	429.13	429.13		
07:45-08:00	**4244S**	397.51	397.51		
07:45-08:00	**4366**	293.76	293.76		
07:45-08:00	**4547**	266.51	266.51		
08:00-08:15	**4244E**	512.42	512.42		
08:00-08:15	**4244S**	474.66	474.66		
08:00-08:15	**4366**	350.78	350.78		
08:00-08:15	**4547**	318.24	318.24		
08:15-08:30	**4244E**	627.58	627.58		
08:15-08:30	**4244S**	581.34	581.34		
08:15-08:30	**4366**	429.62	429.62		
08:15-08:30	**4547**	389.76	389.76		
08:30-08:45	**4244E**	627.58	627.58		
08:30-08:45	**4244S**	581.34	581.34		
08:30-08:45	**4366**	429.62	429.62		
08:30-08:45	**4547**	389.76	389.76		
08:45-09:00	**4244E**	512.42	512.42		
08:45-09:00	**4244S**	474.66	474.66		
08:45-09:00	**4366**	350.78	350.78		
08:45-09:00	**4547**	318.24	318.24		
09:00-09:15	**4244E**	429.13	429.13		
09:00-09:15	**4244S**	397.51	397.51		
09:00-09:15	**4366**	293.76	293.76		
09:00-09:15	**4547**	266.51	266.51		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.000	135.000	214.000	221.000
	4244S	177.000	0.000	32.000	319.000
	4366	282.000	12.200	0.000	96.000
	4547	182.000	133.000	39.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.00	0.24	0.38	0.39
	4244S	0.34	0.00	0.06	0.60
	4366	0.72	0.03	0.00	0.25
	4547	0.51	0.38	0.11	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	1.000	1.000	1.000	1.000
	4244S	1.000	1.000	1.000	1.000
	4366	1.000	1.000	1.000	1.000
	4547	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.0	0.0	0.0	0.0
	4244S	0.0	0.0	0.0	0.0
	4366	0.0	0.0	0.0	0.0
	4547	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)
4244E	7.99	1.40	4.94	A	523.73	785.60	77.92	5.95	0.87
4244S	24.76	4.13	13.95	C	482.95	724.42	178.80	14.81	1.99
4366	331.06	40.00	69.20	F	360.14	540.21	1622.81	180.24	18.03
4547	3.90	0.43	1.84	A	321.47	482.20	25.06	3.12	0.28

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	421.02	105.25	421.48	488.70	138.80	0.00	0.52	4.071	A
4244S	400.28	100.07	407.78	207.78	355.65	0.00	0.64	6.085	A
4366	293.52	73.38	298.43	210.46	552.96	0.00	1.98	23.944	C
4547	268.52	67.13	267.78	491.67	359.72	0.00	0.18	2.107	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	512.31	128.08	512.78	580.56	165.56	0.00	0.76	5.085	A
4244S	460.65	115.16	469.35	251.57	423.80	0.00	1.25	9.655	A
4366	355.28	88.82	358.80	250.37	642.78	0.00	5.75	50.641	F
4547	313.15	78.29	311.20	566.67	434.91	0.00	0.23	2.713	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	630.09	157.52	631.76	654.17	197.50	0.76	1.27	7.698	A
4244S	575.93	143.98	585.83	311.39	527.87	1.25	4.13	22.871	C
4366	431.02	107.75	362.22	314.91	798.80	5.75	23.02	151.840	F
4547	382.87	95.72	383.15	692.50	468.52	0.23	0.39	3.903	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	637.31	159.33	636.11	651.39	201.30	1.27	1.40	7.991	A
4244S	594.91	148.73	576.94	314.81	523.98	4.13	3.90	24.758	C
4366	427.31	106.83	366.67	323.80	777.13	23.02	40.00	316.236	F
4547	393.15	98.29	388.06	679.17	464.63	0.39	0.43	3.848	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	513.43	128.36	513.52	600.93	156.85	1.40	0.75	5.397	A
4244S	463.89	115.97	465.46	244.81	425.56	3.90	1.30	11.869	B
4366	348.33	87.08	391.57	262.69	628.33	40.00	31.02	331.058	F
4547	312.96	78.24	309.54	571.67	448.24	0.43	0.31	3.000	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	428.24	107.06	427.87	519.54	131.76	0.75	0.50	3.969	A
4244S	402.04	100.51	404.35	207.41	353.06	1.30	0.63	6.598	A
4366	305.37	76.34	357.22	207.31	550.09	31.02	10.52	156.620	F
4547	258.15	64.54	255.28	511.30	396.02	0.31	0.20	2.279	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	7.23	0.48	4.071	A	A
4244S	9.98	0.67	6.085	A	A
4366	28.46	1.90	23.944	C	C
4547	2.35	0.16	2.107	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	10.76	0.72	5.085	A	A
4244S	18.88	1.26	9.655	A	A
4366	70.16	4.68	50.641	F	D
4547	3.57	0.24	2.713	A	A

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	20.10	1.34	7.698	A	A
4244S	54.16	3.61	22.871	C	C
4366	218.73	14.58	151.840	F	F
4547	6.30	0.42	3.903	A	A

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	20.81	1.39	7.991	A	A
4244S	59.83	3.99	24.758	C	C
4366	476.43	31.76	316.236	F	F
4547	6.24	0.42	3.848	A	A

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	11.75	0.78	5.397	A	A
4244S	24.73	1.65	11.869	B	B
4366	533.88	35.59	331.058	F	F
4547	4.00	0.27	3.000	A	A

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	7.27	0.48	3.969	A	A
4244S	11.22	0.75	6.598	A	A
4366	295.14	19.68	156.620	F	F
4547	2.58	0.17	2.279	A	A

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.52	0.00	0.00	1.48	2.53
4244S	0.64	0.00	0.00	1.78	2.90
4366	1.98	0.00	0.39	4.90	7.46
4547	0.18	0.00	0.00	0.25	0.83

Queue Variation results: (08:00-08:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.76	0.00	0.00	2.13	3.24
4244S	1.25	0.00	0.00	3.47	5.13
4366	5.75	0.00	3.58	13.68	16.45
4547	0.23	0.00	0.00	0.51	1.07

Queue Variation results: (08:15-08:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1.27	0.00	0.00	3.24	4.69
4244S	4.13	0.00	1.91	10.68	12.92
4366	23.02	2.80	21.73	39.40	44.65
4547	0.39	0.00	0.00	0.92	1.74

Queue Variation results: (08:30-08:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1.40	0.00	0.00	3.73	4.94
4244S	3.90	0.00	1.90	9.76	13.95
4366	40.00	9.20	38.79	64.47	69.20
4547	0.43	0.00	0.00	1.23	1.84

Queue Variation results: (08:45-09:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.75	0.00	0.00	2.10	3.18
4244S	1.30	0.00	0.00	3.53	5.22
4366	31.02	0.69	29.00	58.65	65.20
4547	0.31	0.00	0.00	0.79	1.55

Queue Variation results: (09:00-09:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.50	0.00	0.00	1.34	1.97
4244S	0.63	0.00	0.00	1.93	2.79
4366	10.52	0.00	3.66	30.44	37.90
4547	0.20	0.00	0.00	0.37	1.14

Lane Results

Lanes: Main Results for each time segment

Main results: (07:45-08:00)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	100.00	25.00	100.93	774.14	0.129	0.00	0.06	2.073	A
4244E	1	2	321.48	80.37	323.70	774.14	0.415	0.00	0.45	4.640	A
4244E	2	1	421.02	105.25	421.48			0.00	0.01	0.038	A
4244S	1	1	400.28	100.07	407.78	763.25	0.524	0.00	0.64	6.085	A
4366	1	1	293.52	73.38	298.43	416.43	0.705	0.00	1.98	23.944	C
4547	1	1	268.52	67.13	267.78	951.52	0.282	0.00	0.18	2.107	A

Main results: (08:00-08:15)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	119.17	29.79	119.26	766.55	0.155	0.06	0.08	2.149	A
4244E	1	2	393.61	98.40	390.56	766.55	0.513	0.45	0.67	5.844	A
4244E	2	1	512.31	128.08	512.78			0.01	0.01	0.105	A
4244S	1	1	460.65	115.16	469.35	742.09	0.621	0.64	1.25	9.655	A
4366	1	1	355.28	88.82	358.80	397.79	0.893	1.98	5.75	50.641	F
4547	1	1	313.15	78.29	311.20	917.07	0.341	0.18	0.23	2.713	A

Main results: (08:15-08:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	153.98	38.50	153.80	757.49	0.203	0.08	0.10	2.501	A
4244E	1	2	477.78	119.44	487.96	757.49	0.631	0.67	1.10	8.696	A
4244E	2	1	630.09	157.52	631.76			0.01	0.06	0.465	A
4244S	1	1	575.93	143.98	585.83	709.77	0.811	1.25	4.13	22.871	C
4366	1	1	431.02	107.75	362.22	365.41	1.180	5.75	23.02	151.840	F
4547	1	1	382.87	95.72	383.15	901.66	0.425	0.23	0.39	3.903	A

Main results: (08:30-08:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	156.76	39.19	158.80	756.41	0.207	0.10	0.09	2.641	A
4244E	1	2	479.35	119.84	478.70	756.41	0.634	1.10	1.22	8.925	A
4244E	2	1	637.31	159.33	636.11			0.06	0.09	0.562	A
4244S	1	1	594.91	148.73	576.94	710.98	0.837	4.13	3.90	24.758	C
4366	1	1	427.31	106.83	366.67	369.90	1.155	23.02	40.00	316.236	F
4547	1	1	393.15	98.29	388.06	903.45	0.435	0.39	0.43	3.848	A

Main results: (08:45-09:00)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	123.98	31.00	121.76	769.02	0.161	0.09	0.10	2.263	A
4244E	1	2	389.54	97.38	391.76	769.02	0.507	1.22	0.64	6.220	A
4244E	2	1	513.43	128.36	513.52			0.09	0.01	0.138	A
4244S	1	1	463.89	115.97	465.46	741.54	0.626	3.90	1.30	11.869	B
4366	1	1	348.33	87.08	391.57	400.79	0.869	40.00	31.02	331.058	F
4547	1	1	312.96	78.24	309.54	910.96	0.344	0.43	0.31	3.000	A

Main results: (09:00-09:15)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	102.31	25.58	102.69	776.14	0.132	0.10	0.05	1.990	A
4244E	1	2	325.56	81.39	326.02	776.14	0.419	0.64	0.44	4.559	A
4244E	2	1	428.24	107.06	427.87			0.01	0.01	0.029	A
4244S	1	1	402.04	100.51	404.35	764.05	0.526	1.30	0.63	6.598	A
4366	1	1	305.37	76.34	357.22	417.03	0.732	31.02	10.52	156.620	F
4547	1	1	258.15	64.54	255.28	934.89	0.276	0.31	0.20	2.279	A

Lanes: Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	0.87	0.06	2.073	A	A
4244E	1	2	6.29	0.42	4.640	A	A
4244E	2	1	0.07	0.00	0.038	A	A
4244S	1	1	9.98	0.67	6.085	A	A
4366	1	1	28.46	1.90	23.944	C	C
4547	1	1	2.35	0.16	2.107	A	A

Queueing Delay results: (08:00-08:15)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.07	0.07	2.149	A	A
4244E	1	2	9.47	0.63	5.844	A	A
4244E	2	1	0.22	0.01	0.105	A	A
4244S	1	1	18.88	1.26	9.655	A	A
4366	1	1	70.16	4.68	50.641	F	D
4547	1	1	3.57	0.24	2.713	A	A

Queueing Delay results: (08:15-08:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.56	0.10	2.501	A	A
4244E	1	2	17.33	1.16	8.696	A	A
4244E	2	1	1.21	0.08	0.465	A	A
4244S	1	1	54.16	3.61	22.871	C	C
4366	1	1	218.73	14.58	151.840	F	F
4547	1	1	6.30	0.42	3.903	A	A

Queueing Delay results: (08:30-08:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.65	0.11	2.641	A	A
4244E	1	2	17.70	1.18	8.925	A	A
4244E	2	1	1.46	0.10	0.562	A	A
4244S	1	1	59.83	3.99	24.758	C	C
4366	1	1	476.43	31.76	316.236	F	F
4547	1	1	6.24	0.42	3.848	A	A

Queueing Delay results: (08:45-09:00)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.17	0.08	2.263	A	A
4244E	1	2	10.28	0.69	6.220	A	A
4244E	2	1	0.31	0.02	0.138	A	A
4244S	1	1	24.73	1.65	11.869	B	B
4366	1	1	533.88	35.59	331.058	F	F
4547	1	1	4.00	0.27	3.000	A	A

Queueing Delay results: (09:00-09:15)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	0.86	0.06	1.990	A	A
4244E	1	2	6.36	0.42	4.559	A	A
4244E	2	1	0.05	0.00	0.029	A	A
4244S	1	1	11.22	0.75	6.598	A	A
4366	1	1	295.14	19.68	156.620	F	F
4547	1	1	2.58	0.17	2.279	A	A

Lanes: Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.06	0.00	0.00	0.00	0.02
4244E	1	2	0.45	0.00	0.00	1.26	2.48
4244E	2	1	0.01	0.00	0.00	0.00	0.00
4244S	1	1	0.64	0.00	0.00	1.78	2.90
4366	1	1	1.98	0.00	0.39	4.90	7.46
4547	1	1	0.18	0.00	0.00	0.25	0.83

Queue Variation results: (08:00-08:15)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.08	0.00	0.00	0.00	0.27
4244E	1	2	0.67	0.00	0.00	1.98	3.09
4244E	2	1	0.01	0.00	0.00	0.00	0.00
4244S	1	1	1.25	0.00	0.00	3.47	5.13
4366	1	1	5.75	0.00	3.58	13.68	16.45
4547	1	1	0.23	0.00	0.00	0.51	1.07

Queue Variation results: (08:15-08:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.10	0.00	0.00	0.00	0.52
4244E	1	2	1.10	0.00	0.00	3.01	4.40
4244E	2	1	0.06	0.00	0.00	0.00	0.00
4244S	1	1	4.13	0.00	1.91	10.68	12.92
4366	1	1	23.02	2.80	21.73	39.40	44.65
4547	1	1	0.39	0.00	0.00	0.92	1.74

Queue Variation results: (08:30-08:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.09	0.00	0.00	0.00	0.34
4244E	1	2	1.22	0.00	0.00	3.64	4.86
4244E	2	1	0.09	0.00	0.00	0.00	0.00
4244S	1	1	3.90	0.00	1.90	9.76	13.95
4366	1	1	40.00	9.20	38.79	64.47	69.20
4547	1	1	0.43	0.00	0.00	1.23	1.84

Queue Variation results: (08:45-09:00)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.10	0.00	0.00	0.00	0.45
4244E	1	2	0.64	0.00	0.00	1.91	3.08
4244E	2	1	0.01	0.00	0.00	0.00	0.00
4244S	1	1	1.30	0.00	0.00	3.53	5.22
4366	1	1	31.02	0.69	29.00	58.65	65.20
4547	1	1	0.31	0.00	0.00	0.79	1.55

Queue Variation results: (09:00-09:15)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.05	0.00	0.00	0.00	0.00
4244E	1	2	0.44	0.00	0.00	1.27	1.97
4244E	2	1	0.01	0.00	0.00	0.00	0.00
4244S	1	1	0.63	0.00	0.00	1.93	2.79
4366	1	1	10.52	0.00	3.66	30.44	37.90
4547	1	1	0.20	0.00	0.00	0.37	1.14

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A4244_B4547_ENTRY_LANE.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A4244 B4547\2018 DF
Report generation date: 14/06/2018 17:16:49

« (Default Analysis Set) - 2023 Base + Dev, PM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Direct/Resultant Flows
» Turning Proportions
» Vehicle Mix
» Results
» Lane Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 [Entry Lane Simulation] - 2023 Base + Dev			
Arm 4244E	2.30	11.84	N/A	B
Arm 4244S	0.84	8.42	N/A	A
Arm 4366	3.58	39.70	N/A	E
Arm 4547	1.98	10.58	N/A	B

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM" model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:15 - 17:45
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM " model duration: 16:15 - 17:45
"D8 - 2023 Base + Dev + Seasonality, PM Aug" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 17:16:47

File summary

Title	(untitled)
Location	
Site Number	
Date	17/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

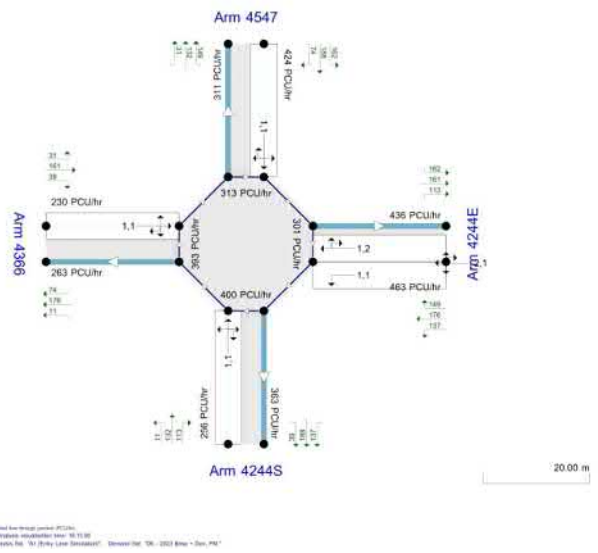
Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Entry Lane Analysis Options

Stop Criteria (%)	Random Seed	Results Refresh Speed (s)	Individual Vehicle Animation Number Of Trials	Time Step Size (s)	Last Run Random Seed	Last Run Number Of Trials
5.00	-1	3	1	10	2113268251	374



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	Entry Lane Simulation		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 Base + Dev, PM	2023 Base + Dev	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	A4244 B4547 B4366	Roundabout	4244E,4244S,4366,4547			15.36	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
4244E	4244E	(untitled)	
4244S	4244S	(untitled)	
4366	4366	(untitled)	
4547	4547	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
4244E	0.00	99999.00
4244S	0.00	99999.00
4366	0.00	99999.00
4547	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
4244E	3.00	10.00	18.00	25.00	48.00	40.00	
4244S	5.00	6.40	7.30	15.00	48.00	56.00	
4366	4.00	5.00	15.00	40.00	48.00	26.00	
4547	3.00	5.50	10.00	41.00	48.00	23.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
4244E		(calculated)	(calculated)	0.630	1807.798
4244S		(calculated)	(calculated)	0.565	1588.495
4366		(calculated)	(calculated)	0.593	1517.753
4547		(calculated)	(calculated)	0.573	1395.442

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
4244E	Percentage			90.00
4244S	Percentage			55.00
4366	Percentage			35.00
4547	Percentage			80.00

Entry Lane Analysis: Arm options

Arm	Lane Capacity Source	Traffic Considering Secondary Lanes (%)
4244E	Evenly split	10.00
4244S	Evenly split	10.00
4366	Evenly split	10.00
4547	Evenly split	10.00

Lanes

Arm	Lane Level	Lane	Has Limited Storage	Storage (PCU)	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
4244E	1	1	✓	6.00	0.00	99999.00
4244E	1	2	✓	6.00	0.00	99999.00
4244E	2	1		Infinity		
4244S	1	1		Infinity	0.00	99999.00
4366	1	1		Infinity	0.00	99999.00
4547	1	1		Infinity	0.00	99999.00

Entry Lane slope and intercept

Arm	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
4244E	(calculated)	(calculated)	0.315	903.899
4244E	(calculated)	(calculated)	0.315	903.899
4244S	(calculated)	(calculated)	0.565	1588.495
4366	(calculated)	(calculated)	0.593	1517.753
4547	(calculated)	(calculated)	0.573	1395.442

Lane Movements

Junction	Arm	Lane Level	Lane	Arm			
				4244E	4244S	4366	4547
1	4244E	1	1		✓		
1	4244E	1	2	✓		✓	✓
1	4244E	2	1	✓	✓	✓	✓
1	4244S	1	1	✓	✓	✓	✓
1	4366	1	1	✓	✓	✓	✓
1	4547	1	1	✓	✓	✓	✓

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
4244E	ONE HOUR	✓	607.00	100.000
4244S	ONE HOUR	✓	342.00	100.000
4366	ONE HOUR	✓	302.00	100.000
4547	ONE HOUR	✓	580.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	4244E	456.98	456.98		
16:15-16:30	4244S	257.48	257.48		
16:15-16:30	4366	227.36	227.36		
16:15-16:30	4547	436.65	436.65		
16:30-16:45	4244E	545.68	545.68		
16:30-16:45	4244S	307.45	307.45		
16:30-16:45	4366	271.49	271.49		
16:30-16:45	4547	521.41	521.41		
16:45-17:00	4244E	668.32	668.32		
16:45-17:00	4244S	376.55	376.55		
16:45-17:00	4366	332.51	332.51		
16:45-17:00	4547	638.59	638.59		
17:00-17:15	4244E	668.32	668.32		
17:00-17:15	4244S	376.55	376.55		
17:00-17:15	4366	332.51	332.51		
17:00-17:15	4547	638.59	638.59		
17:15-17:30	4244E	545.68	545.68		
17:15-17:30	4244S	307.45	307.45		
17:15-17:30	4366	271.49	271.49		
17:15-17:30	4547	521.41	521.41		
17:30-17:45	4244E	456.98	456.98		
17:30-17:45	4244S	257.48	257.48		
17:30-17:45	4366	227.36	227.36		
17:30-17:45	4547	436.65	436.65		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.000	173.000	242.000	192.000
	4244S	151.000	0.000	14.000	177.000
	4366	211.000	54.000	0.000	37.000
	4547	220.000	255.000	105.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.00	0.29	0.40	0.32
	4244S	0.44	0.00	0.04	0.52
	4366	0.70	0.18	0.00	0.12
	4547	0.38	0.44	0.18	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	1.000	1.000	1.000	1.000
	4244S	1.000	1.000	1.000	1.000
	4366	1.000	1.000	1.000	1.000
	4547	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.0	0.0	0.0	0.0
	4244S	0.0	0.0	0.0	0.0
	4366	0.0	0.0	0.0	0.0
	4547	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)
4244E	11.84	2.30	8.10	B	562.03	843.05	112.09	7.98	1.25
4244S	8.42	0.84	3.75	A	312.27	468.41	46.83	6.00	0.52
4366	39.70	3.58	12.26	E	275.19	412.78	166.79	24.24	1.85
4547	10.58	1.98	8.26	B	533.32	799.97	91.33	6.85	1.01

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	462.35	115.59	462.51	435.56	300.96	0.00	0.67	4.540	A
4244S	259.41	64.85	256.04	362.73	399.79	0.00	0.31	3.654	A
4366	229.57	57.39	230.21	262.78	393.05	0.00	0.73	11.469	B
4547	422.41	105.60	423.85	310.59	312.67	0.00	0.38	3.600	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	540.00	135.00	539.20	527.49	370.27	0.00	1.02	6.281	A
4244S	299.68	74.92	303.53	423.69	478.56	0.00	0.38	5.370	A
4366	260.05	65.01	266.79	325.83	456.26	0.00	1.17	17.764	C
4547	523.16	130.79	525.88	351.18	371.87	0.00	0.73	5.363	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	679.89	169.97	681.34	646.04	458.02	1.02	2.30	11.231	B
4244S	378.77	94.69	379.57	539.04	588.77	0.38	0.84	7.839	A
4366	331.76	82.94	330.00	394.17	574.17	1.17	3.39	32.810	D
4547	640.91	160.23	645.40	445.51	458.66	0.73	1.77	9.661	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	685.35	171.34	678.13	654.22	450.48	2.30	2.09	11.839	B
4244S	382.30	95.57	388.07	533.90	595.19	0.84	0.83	8.423	A
4366	322.62	80.66	328.88	407.49	575.78	3.39	3.58	39.700	E
4547	646.04	161.51	641.71	441.66	462.99	1.77	1.98	10.580	B

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	544.33	136.08	544.49	521.55	375.56	2.09	1.01	6.981	A
4244S	300.16	75.04	296.47	435.56	483.53	0.83	0.42	4.980	A
4366	268.07	67.02	270.96	322.14	457.86	3.58	1.36	21.322	C
4547	519.47	129.87	518.82	350.53	378.29	1.98	0.76	5.824	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	460.27	115.07	460.11	457.06	325.99	1.01	0.59	4.655	A
4244S	253.32	63.33	250.11	363.69	423.21	0.42	0.27	3.876	A
4366	239.04	59.76	244.97	283.80	389.52	1.36	0.79	12.125	B
4547	447.91	111.98	451.28	302.73	331.76	0.76	0.49	3.682	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	8.57	0.57	4.540	A	A
4244S	3.92	0.26	3.654	A	A
4366	10.70	0.71	11.469	B	B
4547	6.48	0.43	3.600	A	A

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	14.30	0.95	6.281	A	A
4244S	6.90	0.46	5.370	A	A
4366	19.78	1.32	17.764	C	B
4547	11.57	0.77	5.363	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	30.90	2.06	11.231	B	B
4244S	12.18	0.81	7.839	A	A
4366	43.76	2.92	32.810	D	C
4547	25.35	1.69	9.661	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	33.11	2.21	11.839	B	B
4244S	13.21	0.88	8.423	A	A
4366	54.58	3.64	39.700	E	D
4547	28.21	1.88	10.580	B	B

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	16.10	1.07	6.981	A	A
4244S	6.41	0.43	4.980	A	A
4366	25.93	1.73	21.322	C	C
4547	12.85	0.86	5.824	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	9.11	0.61	4.655	A	A
4244S	4.21	0.28	3.876	A	A
4366	12.04	0.80	12.125	B	B
4547	6.87	0.46	3.682	A	A

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.67	0.00	0.00	1.79	2.75
4244S	0.31	0.00	0.00	0.86	1.63
4366	0.73	0.00	0.00	1.88	2.83
4547	0.38	0.00	0.00	1.08	1.97

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1.02	0.00	0.00	2.74	3.77
4244S	0.38	0.00	0.00	0.97	1.79
4366	1.17	0.00	0.00	2.97	4.41
4547	0.73	0.00	0.00	2.14	3.38

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	2.30	0.00	0.77	5.63	7.06
4244S	0.84	0.00	0.00	2.42	3.75
4366	3.39	0.00	1.72	8.10	11.05
4547	1.77	0.00	0.00	5.19	6.91

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	2.09	0.00	0.51	5.08	8.10
4244S	0.83	0.00	0.00	2.46	3.49
4366	3.58	0.00	1.60	8.45	12.26
4547	1.98	0.00	0.28	4.95	8.26

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1.01	0.00	0.00	2.58	3.81
4244S	0.42	0.00	0.00	1.10	1.82
4366	1.36	0.00	0.16	3.26	5.12
4547	0.76	0.00	0.00	1.96	3.81

Queue Variation results: (17:30-17:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.59	0.00	0.00	1.49	2.12
4244S	0.27	0.00	0.00	0.61	1.16
4366	0.79	0.00	0.00	2.12	2.97
4547	0.49	0.00	0.00	1.32	2.19

Lane Results

Lanes: Main Results for each time segment

Main results: (16:15-16:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	136.68	34.17	136.04	728.14	0.188	0.00	0.10	2.546	A
4244E	1	2	325.83	81.46	325.51	728.14	0.447	0.00	0.57	5.273	A
4244E	2	1	462.35	115.59	462.51			0.00	0.01	0.052	A
4244S	1	1	259.41	64.85	256.04	749.54	0.346	0.00	0.31	3.654	A
4366	1	1	229.57	57.39	230.21	449.63	0.511	0.00	0.73	11.469	B
4547	1	1	422.41	105.60	423.85	973.08	0.434	0.00	0.38	3.600	A

Main results: (16:30-16:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	147.75	36.94	150.16	708.49	0.209	0.10	0.11	2.999	A
4244E	1	2	391.44	97.86	381.82	708.49	0.553	0.57	0.86	7.354	A
4244E	2	1	540.00	135.00	539.20			0.01	0.04	0.173	A
4244S	1	1	299.68	74.92	303.53	725.08	0.413	0.31	0.38	5.370	A
4366	1	1	260.05	65.01	266.79	436.51	0.596	0.73	1.17	17.764	C
4547	1	1	523.16	130.79	525.88	945.95	0.553	0.38	0.73	5.363	A

Main results: (16:45-17:00)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	201.50	50.37	201.50	683.59	0.295	0.11	0.28	3.944	A
4244E	1	2	479.84	119.96	468.29	683.59	0.702	0.86	1.78	12.179	B
4244E	2	1	679.89	169.97	681.34			0.04	0.24	1.406	A
4244S	1	1	378.77	94.69	379.57	690.86	0.548	0.38	0.84	7.839	A
4366	1	1	331.76	82.94	330.00	412.03	0.805	1.17	3.39	32.810	D
4547	1	1	640.91	160.23	645.40	906.18	0.707	0.73	1.77	9.661	A

Main results: (17:00-17:15)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	199.57	49.89	200.70	685.73	0.291	0.28	0.18	3.779	A
4244E	1	2	478.56	119.64	477.91	685.73	0.698	1.78	1.57	12.518	B
4244E	2	1	685.35	171.34	678.13			0.24	0.34	1.792	A
4244S	1	1	382.30	95.57	388.07	688.87	0.555	0.84	0.83	8.423	A
4366	1	1	322.62	80.66	328.88	411.70	0.784	3.39	3.58	39.700	E
4547	1	1	646.04	161.51	641.71	904.19	0.714	1.77	1.98	10.580	B

Main results: (17:15-17:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	151.60	37.90	150.00	706.98	0.214	0.18	0.12	3.085	A
4244E	1	2	392.89	98.22	393.53	706.98	0.556	1.57	0.88	8.137	A
4244E	2	1	544.33	136.08	544.49			0.34	0.01	0.333	A
4244S	1	1	300.16	75.04	296.47	723.54	0.415	0.83	0.42	4.980	A
4366	1	1	268.07	67.02	270.96	436.17	0.615	3.58	1.36	21.322	C
4547	1	1	519.47	129.87	518.82	943.01	0.551	1.98	0.76	5.824	A

Main results: (17:30-17:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	129.79	32.45	126.26	721.04	0.180	0.12	0.13	2.603	A
4244E	1	2	330.32	82.58	334.65	721.04	0.458	0.88	0.45	5.361	A
4244E	2	1	460.27	115.07	460.11			0.01	0.01	0.087	A
4244S	1	1	253.32	63.33	250.11	742.27	0.341	0.42	0.27	3.876	A
4366	1	1	239.04	59.76	244.97	450.36	0.531	1.36	0.79	12.125	B
4547	1	1	447.91	111.98	451.28	964.33	0.464	0.76	0.49	3.682	A

Lanes: Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.39	0.09	2.546	A	A
4244E	1	2	7.08	0.47	5.273	A	A
4244E	2	1	0.10	0.01	0.052	A	A
4244S	1	1	3.92	0.26	3.654	A	A
4366	1	1	10.70	0.71	11.469	B	B
4547	1	1	6.48	0.43	3.600	A	A

Queueing Delay results: (16:30-16:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.97	0.13	2.999	A	A
4244E	1	2	11.94	0.80	7.354	A	A
4244E	2	1	0.39	0.03	0.173	A	A
4244S	1	1	6.90	0.46	5.370	A	A
4366	1	1	19.78	1.32	17.764	C	B
4547	1	1	11.57	0.77	5.363	A	A

Queueing Delay results: (16:45-17:00)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	3.13	0.21	3.944	A	A
4244E	1	2	23.90	1.59	12.179	B	B
4244E	2	1	3.87	0.26	1.406	A	A
4244S	1	1	12.18	0.81	7.839	A	A
4366	1	1	43.76	2.92	32.810	D	C
4547	1	1	25.35	1.69	9.661	A	A

Queueing Delay results: (17:00-17:15)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	3.02	0.20	3.779	A	A
4244E	1	2	25.11	1.67	12.518	B	B
4244E	2	1	4.99	0.33	1.792	A	A
4244S	1	1	13.21	0.88	8.423	A	A
4366	1	1	54.58	3.64	39.700	E	D
4547	1	1	28.21	1.88	10.580	B	B

Queueing Delay results: (17:15-17:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	2.00	0.13	3.085	A	A
4244E	1	2	13.27	0.88	8.137	A	A
4244E	2	1	0.82	0.05	0.333	A	A
4244S	1	1	6.41	0.43	4.980	A	A
4366	1	1	25.93	1.73	21.322	C	C
4547	1	1	12.85	0.86	5.824	A	A

Queueing Delay results: (17:30-17:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.45	0.10	2.603	A	A
4244E	1	2	7.49	0.50	5.361	A	A
4244E	2	1	0.17	0.01	0.087	A	A
4244S	1	1	4.21	0.28	3.876	A	A
4366	1	1	12.04	0.80	12.125	B	B
4547	1	1	6.87	0.46	3.682	A	A

Lanes: Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.10	0.00	0.00	0.00	0.42
4244E	1	2	0.57	0.00	0.00	1.61	2.56
4244E	2	1	0.01	0.00	0.00	0.00	0.00
4244S	1	1	0.31	0.00	0.00	0.86	1.63
4366	1	1	0.73	0.00	0.00	1.88	2.83
4547	1	1	0.38	0.00	0.00	1.08	1.97

Queue Variation results: (16:30-16:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.11	0.00	0.00	0.00	0.60
4244E	1	2	0.86	0.00	0.00	2.65	3.75
4244E	2	1	0.04	0.00	0.00	0.00	0.00
4244S	1	1	0.38	0.00	0.00	0.97	1.79
4366	1	1	1.17	0.00	0.00	2.97	4.41
4547	1	1	0.73	0.00	0.00	2.14	3.38

Queue Variation results: (16:45-17:00)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.28	0.00	0.00	0.68	1.64
4244E	1	2	1.78	0.00	0.36	6.00	6.00
4244E	2	1	0.24	0.00	0.00	0.00	0.33
4244S	1	1	0.84	0.00	0.00	2.42	3.75
4366	1	1	3.39	0.00	1.72	8.10	11.05
4547	1	1	1.77	0.00	0.00	5.19	6.91

Queue Variation results: (17:00-17:15)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.18	0.00	0.00	0.29	0.86
4244E	1	2	1.57	0.00	0.22	4.90	6.00
4244E	2	1	0.34	0.00	0.00	0.00	2.10
4244S	1	1	0.83	0.00	0.00	2.46	3.49
4366	1	1	3.58	0.00	1.60	8.45	12.26
4547	1	1	1.86	0.00	0.28	4.95	8.26

Queue Variation results: (17:15-17:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.12	0.00	0.00	0.00	0.63
4244E	1	2	0.88	0.00	0.00	2.39	3.76
4244E	2	1	0.01	0.00	0.00	0.00	0.00
4244S	1	1	0.42	0.00	0.00	1.10	1.82
4366	1	1	1.36	0.00	0.16	3.26	5.12
4547	1	1	0.76	0.00	0.00	1.96	3.61

Queue Variation results: (17:30-17:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.13	0.00	0.00	0.00	0.65
4244E	1	2	0.45	0.00	0.00	1.16	1.80
4244E	2	1	0.01	0.00	0.00	0.00	0.00
4244S	1	1	0.27	0.00	0.00	0.61	1.16
4366	1	1	0.79	0.00	0.00	2.12	2.97
4547	1	1	0.49	0.00	0.00	1.32	2.19

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A4244_B4547_ENTRY_LANE.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A4244 B4547\2018 DF
Report generation date: 14/06/2018 17:44:15

« (Default Analysis Set) - 2023 Secondary Base + Dev, PM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Direct/Resultant Flows
» Turning Proportions
» Vehicle Mix
» Results
» Lane Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 [Entry Lane Simulation] - 2023 Secondary Base + Dev			
Arm 4244E	1.37	7.39	N/A	A
Arm 4244S	0.74	7.11	N/A	A
Arm 4366	3.37	36.50	N/A	E
Arm 4547	1.17	7.42	N/A	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM" model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:15 - 17:45
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:15 - 17:45
"D8 - 2023 Base + Dev + Seasonality, PM Aug" model duration: 16:15 - 17:45
"D9 - 2023 Secondary Base + Dev, PM " model duration: 16:15 - 17:45
"D10 - 2023 Secondary Base + Dev + Seasonality, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 17:44:13

File summary

Title	(untitled)
Location	
Site Number	
Date	17/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

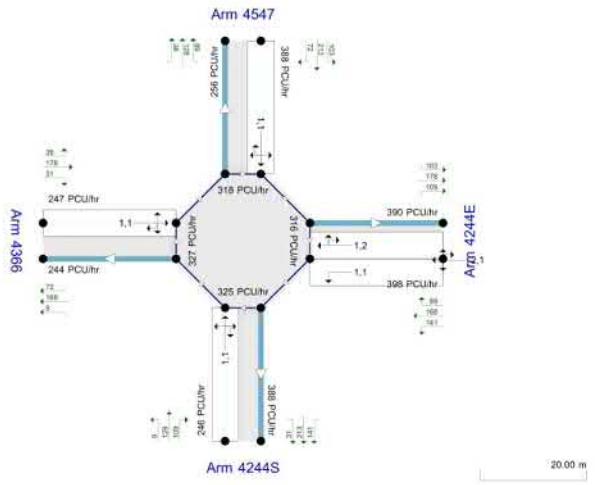
Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Entry Lane Analysis Options

Stop Criteria (%)	Random Seed	Results Refresh Speed (s)	Individual Vehicle Animation Number Of Trials	Time Step Size (s)	Last Run Random Seed	Last Run Number Of Trials
5.00	-1	3	1	10	1520554075	178



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2023 Secondary Base + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	Entry Lane Simulation		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relat
2023 Secondary Base + Dev, PM	2023 Secondary Base + Dev	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	A4244 B4547 B4366	Roundabout	4244E,4244S,4366,4547			12.59	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
4244E	4244E	(untitled)	
4244S	4244S	(untitled)	
4366	4366	(untitled)	
4547	4547	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
4244E	0.00	99999.00
4244S	0.00	99999.00
4366	0.00	99999.00
4547	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
4244E	3.00	10.00	18.00	25.00	48.00	40.00	
4244S	5.00	6.40	7.30	15.00	48.00	56.00	
4366	4.00	5.00	15.00	40.00	48.00	26.00	
4547	3.00	5.50	10.00	41.00	48.00	23.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
4244E		(calculated)	(calculated)	0.630	1807.798
4244S		(calculated)	(calculated)	0.565	1588.495
4366		(calculated)	(calculated)	0.593	1517.753
4547		(calculated)	(calculated)	0.573	1395.442

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
4244E	Percentage			90.00
4244S	Percentage			55.00
4366	Percentage			35.00
4547	Percentage			80.00

Entry Lane Analysis: Arm options

Arm	Lane Capacity Source	Traffic Considering Secondary Lanes (%)
4244E	Evenly split	10.00
4244S	Evenly split	10.00
4366	Evenly split	10.00
4547	Evenly split	10.00

Lanes

Arm	Lane Level	Lane	Has Limited Storage	Storage (PCU)	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
4244E	**1**	1	✓	6.00	0.00	99999.00
4244E	**1**	2	✓	6.00	0.00	99999.00
4244E	**2**	1		Infinity		
4244S	**1**	1		Infinity	0.00	99999.00
4366	**1**	1		Infinity	0.00	99999.00
4547	**1**	1		Infinity	0.00	99999.00

Entry Lane slope and intercept

Arm	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
4244E	(calculated)	(calculated)	0.315	903.899
4244E	(calculated)	(calculated)	0.315	903.899
4244S	(calculated)	(calculated)	0.565	1588.495
4366	(calculated)	(calculated)	0.593	1517.753
4547	(calculated)	(calculated)	0.573	1395.442

Lane Movements

Junction	Arm	Lane Level	Lane	Arm			
				4244E	4244S	4366	4547
1	**4244E**	**1**	**1**		✓		
1	**4244E**	**1**	**2**	✓		✓	✓
1	**4244E**	**2**	**1**	✓	✓	✓	✓
1	**4244S**	**1**	**1**	✓	✓	✓	✓
1	**4366**	**1**	**1**	✓	✓	✓	✓
1	**4547**	**1**	**1**	✓	✓	✓	✓

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
4244E	ONE HOUR	✓	534.00	100.000
4244S	ONE HOUR	✓	342.00	100.000
4366	ONE HOUR	✓	302.00	100.000
4547	ONE HOUR	✓	506.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	**4244E**	402.02	402.02		
16:15-16:30	**4244S**	257.48	257.48		
16:15-16:30	**4366**	227.36	227.36		
16:15-16:30	**4547**	380.94	380.94		
16:30-16:45	**4244E**	480.06	480.06		
16:30-16:45	**4244S**	307.45	307.45		
16:30-16:45	**4366**	271.49	271.49		
16:30-16:45	**4547**	454.88	454.88		
16:45-17:00	**4244E**	587.94	587.94		
16:45-17:00	**4244S**	376.55	376.55		
16:45-17:00	**4366**	332.51	332.51		
16:45-17:00	**4547**	557.12	557.12		
17:00-17:15	**4244E**	587.94	587.94		
17:00-17:15	**4244S**	376.55	376.55		
17:00-17:15	**4366**	332.51	332.51		
17:00-17:15	**4547**	557.12	557.12		
17:15-17:30	**4244E**	480.06	480.06		
17:15-17:30	**4244S**	307.45	307.45		
17:15-17:30	**4366**	271.49	271.49		
17:15-17:30	**4547**	454.88	454.88		
17:30-17:45	**4244E**	402.02	402.02		
17:30-17:45	**4244S**	257.48	257.48		
17:30-17:45	**4366**	227.36	227.36		
17:30-17:45	**4547**	380.94	380.94		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.000	173.000	242.000	119.000
	4244S	151.000	0.000	14.000	177.000
	4366	211.000	37.000	0.000	54.000
	4547	146.000	255.000	105.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.00	0.32	0.45	0.22
	4244S	0.44	0.00	0.04	0.52
	4366	0.70	0.12	0.00	0.18
	4547	0.29	0.50	0.21	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	1.000	1.000	1.000	1.000
	4244S	1.000	1.000	1.000	1.000
	4366	1.000	1.000	1.000	1.000
	4547	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.0	0.0	0.0	0.0
	4244S	0.0	0.0	0.0	0.0
	4366	0.0	0.0	0.0	0.0
	4547	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)
4244E	7.39	1.37	5.28	A	491.46	737.19	68.45	5.57	0.76
4244S	7.11	0.74	3.42	A	308.93	463.40	42.40	5.49	0.47
4366	36.50	3.37	12.53	E	280.06	420.08	155.62	22.23	1.73
4547	7.42	1.17	4.70	A	472.75	709.13	59.06	5.00	0.66

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	398.09	99.52	398.09	390.00	315.84	0.00	0.48	3.850	A
4244S	247.75	61.94	246.07	388.31	324.94	0.00	0.21	3.728	A
4366	247.08	61.77	247.08	244.04	326.97	0.00	0.89	11.374	B
4547	388.31	97.08	387.98	256.18	317.87	0.00	0.29	2.985	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	482.36	120.59	483.03	458.09	353.60	0.00	0.58	4.919	A
4244S	301.35	75.34	307.75	416.29	428.09	0.00	0.35	4.689	A
4366	273.03	68.26	281.80	326.63	409.21	0.00	1.26	17.423	C
4547	457.42	114.35	449.33	328.65	362.36	0.00	0.66	4.252	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	621.91	155.48	617.87	555.51	443.93	0.58	1.37	7.249	A
4244S	373.82	93.46	376.52	517.75	527.87	0.35	0.74	7.115	A
4366	321.91	80.48	314.83	412.25	492.13	1.26	2.83	29.999	D
4547	570.00	142.50	565.96	373.48	433.48	0.66	1.17	7.419	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	574.04	143.51	576.07	566.63	446.63	1.37	1.21	7.393	A
4244S	363.03	90.76	361.69	516.40	513.71	0.74	0.65	7.060	A
4366	348.88	87.22	336.40	406.18	469.21	2.83	3.37	36.498	E
4547	580.11	145.03	580.79	373.15	432.47	1.17	1.10	6.724	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	477.64	119.41	477.64	466.85	357.98	1.21	0.46	5.021	A
4244S	307.08	76.77	307.08	420.67	427.75	0.65	0.48	4.834	A
4366	267.30	66.83	281.12	338.43	396.40	3.37	1.18	19.590	C
4547	448.31	112.08	455.73	308.43	369.10	1.10	0.55	4.457	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	394.72	98.68	394.72	385.28	310.79	0.46	0.49	3.745	A
4244S	260.56	65.14	259.21	360.00	337.75	0.48	0.27	3.775	A
4366	222.13	55.53	234.27	264.61	332.36	1.18	0.48	11.245	B
4547	392.36	98.09	385.96	256.52	310.11	0.55	0.33	2.953	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	6.45	0.43	3.850	A	A
4244S	4.02	0.27	3.728	A	A
4366	10.68	0.71	11.374	B	B
4547	4.67	0.31	2.985	A	A

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	9.79	0.65	4.919	A	A
4244S	5.93	0.40	4.689	A	A
4366	19.87	1.32	17.423	C	B
4547	7.99	0.53	4.252	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	17.70	1.18	7.249	A	A
4244S	11.11	0.74	7.115	A	A
4366	39.78	2.65	29.999	D	C
4547	17.53	1.17	7.419	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	18.10	1.21	7.393	A	A
4244S	10.95	0.73	7.060	A	A
4366	50.43	3.36	36.498	E	D
4547	15.62	1.04	6.724	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	10.05	0.67	5.021	A	A
4244S	6.19	0.41	4.834	A	A
4366	23.82	1.59	19.590	C	B
4547	8.45	0.56	4.457	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	6.35	0.42	3.745	A	A
4244S	4.20	0.28	3.775	A	A
4366	11.04	0.74	11.245	B	B
4547	4.80	0.32	2.953	A	A

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.48	0.00	0.00	1.02	2.02
4244S	0.21	0.00	0.00	0.42	0.95
4366	0.89	0.00	0.00	2.55	3.52
4547	0.29	0.00	0.00	0.78	1.57

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.58	0.00	0.00	1.51	2.42
4244S	0.35	0.00	0.00	0.76	1.52
4366	1.26	0.00	0.00	3.44	4.55
4547	0.66	0.00	0.00	1.68	2.64

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1.37	0.00	0.00	3.32	4.70
4244S	0.74	0.00	0.00	1.93	3.42
4366	2.83	0.00	0.93	6.73	9.70
4547	1.17	0.00	0.00	3.43	4.70

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1.21	0.00	0.00	3.15	5.28
4244S	0.65	0.00	0.00	1.77	3.03
4366	3.37	0.00	1.35	8.87	12.53
4547	1.10	0.00	0.00	3.27	4.03

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.46	0.00	0.00	1.33	1.88
4244S	0.48	0.00	0.00	1.30	1.94
4366	1.18	0.00	0.00	3.69	4.76
4547	0.55	0.00	0.00	1.69	3.03

Queue Variation results: (17:30-17:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.49	0.00	0.00	1.43	1.90
4244S	0.27	0.00	0.00	0.68	1.51
4366	0.48	0.00	0.00	1.36	1.89
4547	0.33	0.00	0.00	0.71	1.85

Lane Results

Lanes: Main Results for each time segment

Main results: (16:15-16:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	141.24	35.31	144.27	723.92	0.195	0.00	0.08	2.658	A
4244E	1	2	256.85	64.21	253.15	723.92	0.355	0.00	0.40	4.412	A
4244E	2	1	398.09	99.52	398.09			0.00	0.00	0.009	A
4244S	1	1	247.75	61.94	246.07	772.78	0.321	0.00	0.21	3.728	A
4366	1	1	247.08	61.77	247.08	463.34	0.533	0.00	0.89	11.374	B
4547	1	1	388.31	97.08	387.98	970.70	0.400	0.00	0.29	2.985	A

Main results: (16:30-16:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	154.38	38.60	153.71	713.21	0.216	0.08	0.13	2.866	A
4244E	1	2	328.65	82.16	337.08	713.21	0.461	0.40	0.45	5.821	A
4244E	2	1	482.36	120.59	483.03			0.00	0.00	0.052	A
4244S	1	1	301.35	75.34	307.75	740.75	0.407	0.21	0.35	4.689	A
4366	1	1	273.03	68.26	281.80	446.27	0.612	0.89	1.26	17.423	C
4547	1	1	457.42	114.35	449.33	950.31	0.481	0.29	0.66	4.252	A

Main results: (16:45-17:00)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	194.16	48.54	191.80	687.59	0.282	0.13	0.22	4.000	A
4244E	1	2	423.71	105.93	409.89	687.59	0.616	0.45	1.05	8.472	A
4244E	2	1	621.91	155.48	617.87			0.00	0.09	0.224	A
4244S	1	1	373.82	93.46	376.52	709.77	0.527	0.35	0.74	7.115	A
4366	1	1	321.91	80.48	314.83	429.06	0.750	1.26	2.83	29.999	D
4547	1	1	570.00	142.50	565.96	917.72	0.621	0.66	1.17	7.419	A

Main results: (17:00-17:15)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	190.79	47.70	187.75	686.83	0.278	0.22	0.19	3.715	A
4244E	1	2	385.28	96.32	395.73	686.83	0.561	1.05	0.91	8.560	A
4244E	2	1	574.04	143.51	576.07			0.09	0.11	0.383	A
4244S	1	1	363.03	90.76	361.69	714.17	0.508	0.74	0.65	7.060	A
4366	1	1	348.88	87.22	336.40	433.82	0.804	2.83	3.37	36.498	E
4547	1	1	580.11	145.03	580.79	918.18	0.632	1.17	1.10	6.724	A

Main results: (17:15-17:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	150.34	37.58	155.73	711.97	0.211	0.19	0.08	3.044	A
4244E	1	2	327.30	81.83	334.72	711.97	0.460	0.91	0.38	5.929	A
4244E	2	1	477.64	119.41	477.64			0.11	0.00	0.059	A
4244S	1	1	307.08	76.77	307.08	740.86	0.414	0.65	0.48	4.834	A
4366	1	1	267.30	66.83	281.12	448.93	0.595	3.37	1.18	19.590	C
4547	1	1	448.31	112.08	455.73	947.22	0.473	1.10	0.55	4.457	A

Main results: (17:30-17:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	136.52	34.13	130.79	725.36	0.188	0.08	0.15	2.531	A
4244E	1	2	258.20	64.55	256.18	725.36	0.356	0.38	0.35	4.313	A
4244E	2	1	394.72	98.68	394.72			0.00	0.00	0.020	A
4244S	1	1	260.56	65.14	259.21	768.80	0.339	0.48	0.27	3.775	A
4366	1	1	222.13	55.53	234.27	462.23	0.481	1.18	0.48	11.245	B
4547	1	1	392.36	98.09	385.96	974.25	0.403	0.55	0.33	2.953	A

Lanes: Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.45	0.10	2.658	A	A
4244E	1	2	4.99	0.33	4.412	A	A
4244E	2	1	0.01	0.00	0.009	A	A
4244S	1	1	4.02	0.27	3.728	A	A
4366	1	1	10.68	0.71	11.374	B	B
4547	1	1	4.67	0.31	2.985	A	A

Queueing Delay results: (16:30-16:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.84	0.12	2.866	A	A
4244E	1	2	7.85	0.52	5.821	A	A
4244E	2	1	0.10	0.01	0.052	A	A
4244S	1	1	5.93	0.40	4.689	A	A
4366	1	1	19.87	1.32	17.423	C	B
4547	1	1	7.99	0.53	4.252	A	A

Queueing Delay results: (16:45-17:00)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	3.21	0.21	4.000	A	A
4244E	1	2	13.95	0.93	8.472	A	A
4244E	2	1	0.54	0.04	0.224	A	A
4244S	1	1	11.11	0.74	7.115	A	A
4366	1	1	39.78	2.65	29.999	D	C
4547	1	1	17.53	1.17	7.419	A	A

Queueing Delay results: (17:00-17:15)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	2.92	0.19	3.715	A	A
4244E	1	2	14.24	0.95	8.560	A	A
4244E	2	1	0.94	0.06	0.383	A	A
4244S	1	1	10.95	0.73	7.060	A	A
4366	1	1	50.43	3.36	36.498	E	D
4547	1	1	15.62	1.04	6.724	A	A

Queueing Delay results: (17:15-17:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.97	0.13	3.044	A	A
4244E	1	2	7.96	0.53	5.929	A	A
4244E	2	1	0.12	0.01	0.059	A	A
4244S	1	1	6.19	0.41	4.834	A	A
4366	1	1	23.82	1.59	19.590	C	B
4547	1	1	8.45	0.56	4.457	A	A

Queueing Delay results: (17:30-17:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.43	0.10	2.531	A	A
4244E	1	2	4.89	0.33	4.313	A	A
4244E	2	1	0.03	0.00	0.020	A	A
4244S	1	1	4.20	0.28	3.775	A	A
4366	1	1	11.04	0.74	11.245	B	B
4547	1	1	4.80	0.32	2.953	A	A

Lanes: Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.08	0.00	0.00	0.00	0.16
4244E	1	2	0.40	0.00	0.00	0.90	1.68
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	0.21	0.00	0.00	0.42	0.95
4366	1	1	0.89	0.00	0.00	2.55	3.52
4547	1	1	0.29	0.00	0.00	0.78	1.57

Queue Variation results: (16:30-16:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.13	0.00	0.00	0.02	0.70
4244E	1	2	0.45	0.00	0.00	1.29	2.22
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	0.35	0.00	0.00	0.76	1.52
4366	1	1	1.26	0.00	0.00	3.44	4.55
4547	1	1	0.66	0.00	0.00	1.68	2.64

Queue Variation results: (16:45-17:00)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.22	0.00	0.00	0.54	1.02
4244E	1	2	1.05	0.00	0.00	3.15	4.70
4244E	2	1	0.09	0.00	0.00	0.00	0.00
4244S	1	1	0.74	0.00	0.00	1.93	3.42
4366	1	1	2.83	0.00	0.93	6.73	9.70
4547	1	1	1.17	0.00	0.00	3.43	4.70

Queue Variation results: (17:00-17:15)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.19	0.00	0.00	0.33	0.88
4244E	1	2	0.91	0.00	0.00	2.91	4.28
4244E	2	1	0.11	0.00	0.00	0.00	0.00
4244S	1	1	0.65	0.00	0.00	1.77	3.03
4366	1	1	3.37	0.00	1.35	8.87	12.53
4547	1	1	1.10	0.00	0.00	3.27	4.03

Queue Variation results: (17:15-17:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.08	0.00	0.00	0.00	0.16
4244E	1	2	0.38	0.00	0.00	1.09	1.72
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	0.48	0.00	0.00	1.30	1.94
4366	1	1	1.18	0.00	0.00	3.69	4.76
4547	1	1	0.55	0.00	0.00	1.69	3.03

Queue Variation results: (17:30-17:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.15	0.00	0.00	0.00	0.90
4244E	1	2	0.35	0.00	0.00	0.87	1.68
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	0.27	0.00	0.00	0.68	1.51
4366	1	1	0.48	0.00	0.00	1.36	1.89
4547	1	1	0.33	0.00	0.00	0.71	1.85

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A4244_B4547_ENTRY_LANE.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A4244 B4547\2018 DF
Report generation date: 14/06/2018 17:19:15

« (Default Analysis Set) - 2023 Base + Dev + Seasonality, PM Aug
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Direct/Resultant Flows
» Turning Proportions
» Vehicle Mix
» Results
» Lane Results

Summary of junction performance

	PM Aug			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 [Entry Lane Simulation] - 2023 Base + Dev + Seasonality			
Arm 4244E	3.40	16.44	N/A	C
Arm 4244S	1.32	11.95	N/A	B
Arm 4366	11.23	96.08	N/A	F
Arm 4547	3.81	15.80	N/A	C

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM" model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:15 - 17:45
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:15 - 17:45
"D8 - 2023 Base + Dev + Seasonality, PM Aug " model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 17:19:14

File summary

Title	(untitled)
Location	
Site Number	
Date	17/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

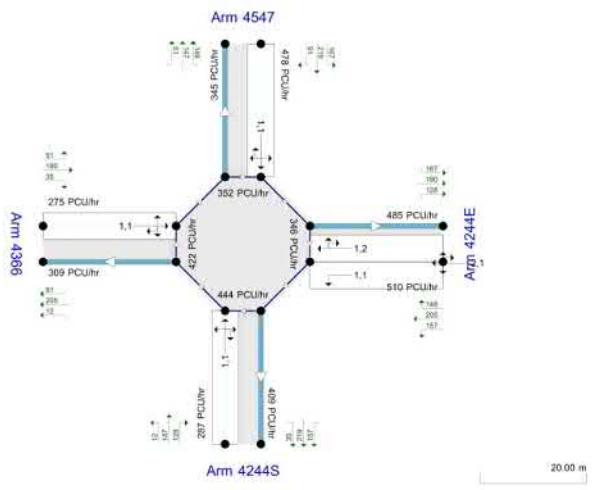
Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Entry Lane Analysis Options

Stop Criteria (%)	Random Seed	Results Refresh Speed (s)	Individual Vehicle Animation Number Of Trials	Time Step Size (s)	Last Run Random Seed	Last Run Number Of Trials
5.00	-1	3	1	10	1130634604	324



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2023 Base + Dev + Seasonality, PM Aug

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	Entry Lane Simulation		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Rel
2023 Base + Dev + Seasonality; PM Aug	2023 Base + Dev + Seasonality	PM Aug		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	A4244 B4547 B4366	Roundabout	4244E,4244S,4366,4547			28.69	D

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Am	Name	Description
4244E	4244E	(untitled)	
4244S	4244S	(untitled)	
4366	4366	(untitled)	
4547	4547	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
4244E	0.00	99999.00
4244S	0.00	99999.00
4366	0.00	99999.00
4547	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
4244E	3.00	10.00	18.00	25.00	48.00	40.00	
4244S	5.00	6.40	7.30	15.00	48.00	56.00	
4366	4.00	5.00	15.00	40.00	48.00	26.00	
4547	3.00	5.50	10.00	41.00	48.00	23.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
4244E		(calculated)	(calculated)	0.630	1807.798
4244S		(calculated)	(calculated)	0.565	1588.495
4366		(calculated)	(calculated)	0.593	1517.753
4547		(calculated)	(calculated)	0.573	1395.442

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
4244E	Percentage			90.00
4244S	Percentage			55.00
4366	Percentage			35.00
4547	Percentage			80.00

Entry Lane Analysis: Arm options

Arm	Lane Capacity Source	Traffic Considering Secondary Lanes (%)
4244E	Evenly split	10.00
4244S	Evenly split	10.00
4366	Evenly split	10.00
4547	Evenly split	10.00

Lanes

Arm	Lane Level	Lane	Has Limited Storage	Storage (PCU)	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
4244E	1	1	✓	6.00	0.00	99999.00
4244E	1	2	✓	6.00	0.00	99999.00
4244E	2	1		Infinity		
4244S	1	1		Infinity	0.00	99999.00
4366	1	1		Infinity	0.00	99999.00
4547	1	1		Infinity	0.00	99999.00

Entry Lane slope and intercept

Arm	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
4244E	(calculated)	(calculated)	0.315	903.899
4244E	(calculated)	(calculated)	0.315	903.899
4244S	(calculated)	(calculated)	0.565	1588.495
4366	(calculated)	(calculated)	0.593	1517.753
4547	(calculated)	(calculated)	0.573	1395.442

Lane Movements

Junction	Arm	Lane Level	Lane	Arm			
				4244E	4244S	4366	4547
1	4244E	1	1		✓		
1	4244E	1	2	✓		✓	✓
1	4244E	2	1	✓	✓	✓	✓
1	4244S	1	1	✓	✓	✓	✓
1	4366	1	1	✓	✓	✓	✓
1	4547	1	1	✓	✓	✓	✓

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
4244E	ONE HOUR	✓	670.00	100.000
4244S	ONE HOUR	✓	389.00	100.000
4366	ONE HOUR	✓	345.00	100.000
4547	ONE HOUR	✓	638.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	4244E	504.41	504.41		
16:15-16:30	4244S	292.86	292.86		
16:15-16:30	4366	259.73	259.73		
16:15-16:30	4547	480.32	480.32		
16:30-16:45	4244E	602.32	602.32		
16:30-16:45	4244S	349.70	349.70		
16:30-16:45	4366	310.15	310.15		
16:30-16:45	4547	573.55	573.55		
16:45-17:00	4244E	737.68	737.68		
16:45-17:00	4244S	428.30	428.30		
16:45-17:00	4366	379.85	379.85		
16:45-17:00	4547	702.45	702.45		
17:00-17:15	4244E	737.68	737.68		
17:00-17:15	4244S	428.30	428.30		
17:00-17:15	4366	379.85	379.85		
17:00-17:15	4547	702.45	702.45		
17:15-17:30	4244E	602.32	602.32		
17:15-17:30	4244S	349.70	349.70		
17:15-17:30	4366	310.15	310.15		
17:15-17:30	4547	573.55	573.55		
17:30-17:45	4244E	504.41	504.41		
17:30-17:45	4244S	292.86	292.86		
17:30-17:45	4366	259.73	259.73		
17:30-17:45	4547	480.32	480.32		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.000	197.000	276.000	197.000
	4244S	172.000	0.000	16.000	201.000
	4366	241.000	42.000	0.000	62.000
	4547	228.000	291.000	119.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.00	0.29	0.41	0.29
	4244S	0.44	0.00	0.04	0.52
	4366	0.70	0.12	0.00	0.18
	4547	0.36	0.46	0.19	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	1.000	1.000	1.000	1.000
	4244S	1.000	1.000	1.000	1.000
	4366	1.000	1.000	1.000	1.000
	4547	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.0	0.0	0.0	0.0
	4244S	0.0	0.0	0.0	0.0
	4366	0.0	0.0	0.0	0.0
	4547	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)
4244E	16.44	3.40	11.56	C	612.62	918.94	158.78	10.37	1.76
4244S	11.95	1.32	5.63	B	365.34	548.01	72.53	7.94	0.81
4366	96.08	11.23	32.20	F	315.49	473.24	407.78	51.70	4.53
4547	15.80	3.81	11.70	C	592.50	888.75	144.26	9.74	1.60

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	513.33	128.33	510.00	484.81	345.56	0.00	0.73	5.358	A
4244S	290.93	72.73	286.85	409.44	443.89	0.00	0.45	4.530	A
4366	260.00	65.00	275.19	308.70	422.04	0.00	1.02	14.403	B
4547	481.67	120.42	478.15	345.00	352.22	0.00	0.60	4.239	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	613.33	153.33	614.07	592.78	396.85	0.00	1.13	7.503	A
4244S	354.07	88.52	357.04	486.85	525.56	0.00	0.61	6.504	A
4366	305.56	76.39	318.89	367.04	515.56	0.00	2.04	26.146	D
4547	593.89	148.47	576.11	420.93	413.52	0.00	1.42	7.037	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	728.15	182.04	731.67	675.19	510.37	1.13	3.40	14.493	B
4244S	438.52	109.63	456.30	596.30	640.00	0.61	1.30	11.300	B
4366	382.59	95.65	362.78	446.85	649.44	2.04	7.84	62.379	F
4547	720.56	180.14	693.15	519.81	492.41	1.42	3.81	14.840	B

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	730.19	182.55	734.44	712.22	486.85	3.40	3.32	16.444	C
4244S	445.00	111.25	441.85	567.78	646.30	1.30	1.32	11.949	B
4366	384.44	96.11	373.89	438.52	649.63	7.84	11.23	96.075	F
4547	704.81	176.20	694.44	518.89	504.63	3.81	3.15	15.797	C

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	600.74	150.19	597.78	580.00	416.48	3.32	1.44	8.739	A
4244S	354.26	88.56	349.81	487.78	522.96	1.32	0.64	6.725	A
4366	307.59	76.90	322.22	364.63	508.15	11.23	3.80	64.020	F
4547	577.59	144.40	573.89	407.78	422.59	3.15	1.05	8.362	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	490.00	122.50	489.81	482.96	336.67	1.44	0.79	5.525	A
4244S	309.26	77.31	303.33	384.63	437.22	0.64	0.45	4.923	A
4366	252.78	63.19	259.44	312.78	427.78	3.80	1.23	21.200	C
4547	476.48	119.12	475.19	342.78	344.44	1.05	0.73	4.511	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	11.16	0.74	5.358	A	A
4244S	5.51	0.37	4.530	A	A
4366	15.15	1.01	14.403	B	B
4547	8.50	0.57	4.239	A	A

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	18.82	1.25	7.503	A	A
4244S	9.38	0.63	6.504	A	A
4366	32.77	2.18	26.146	D	C
4547	16.58	1.11	7.037	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	43.56	2.90	14.493	B	B
4244S	20.07	1.34	11.300	B	B
4366	90.73	6.05	62.379	F	E
4547	42.85	2.86	14.840	B	B

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	50.70	3.38	16.444	C	B
4244S	21.49	1.43	11.949	B	B
4366	144.36	9.62	96.075	F	F
4547	46.45	3.10	15.797	C	B

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	22.61	1.51	8.739	A	A
4244S	9.92	0.66	6.725	A	A
4366	98.00	6.53	64.020	F	E
4547	20.63	1.38	8.362	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	11.92	0.79	5.525	A	A
4244S	6.16	0.41	4.923	A	A
4366	26.77	1.78	21.200	C	C
4547	9.26	0.62	4.511	A	A

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.73	0.00	0.00	1.71	2.65
4244S	0.45	0.00	0.00	1.37	2.34
4366	1.02	0.00	0.00	2.78	4.26
4547	0.60	0.00	0.00	1.77	3.25

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1.13	0.00	0.00	2.81	4.35
4244S	0.61	0.00	0.00	1.78	2.73
4366	2.04	0.00	0.46	5.62	7.56
4547	1.42	0.00	0.00	3.81	6.27

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	3.40	0.00	1.81	8.32	11.56
4244S	1.30	0.00	0.00	3.48	5.63
4366	7.84	0.00	5.50	17.62	21.90
4547	3.81	0.00	2.03	9.47	11.70

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	3.32	0.00	1.66	7.76	10.11
4244S	1.32	0.00	0.00	3.51	4.80
4366	11.23	0.00	8.22	24.20	32.20
4547	3.15	0.00	1.23	8.47	10.36

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1.44	0.00	0.00	4.12	5.44
4244S	0.64	0.00	0.00	1.69	2.40
4366	3.80	0.00	1.28	8.92	15.20
4547	1.05	0.00	0.00	2.97	4.16

Queue Variation results: (17:30-17:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.79	0.00	0.00	1.96	2.97
4244S	0.45	0.00	0.00	1.31	2.27
4366	1.23	0.00	0.00	3.06	4.43
4547	0.73	0.00	0.00	1.95	2.98

Lane Results

Lanes: Main Results for each time segment

Main results: (16:15-16:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	157.22	39.31	155.37	715.49	0.220	0.00	0.14	2.941	A
4244E	1	2	352.78	88.19	352.41	715.49	0.493	0.00	0.53	6.187	A
4244E	2	1	513.33	128.33	510.00			0.00	0.06	0.122	A
4244S	1	1	290.93	72.73	286.85	735.85	0.395	0.00	0.45	4.530	A
4366	1	1	260.00	65.00	275.19	443.61	0.586	0.00	1.02	14.403	B
4547	1	1	481.67	120.42	478.15	954.95	0.504	0.00	0.60	4.239	A

Main results: (16:30-16:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	185.93	46.48	187.41	700.94	0.265	0.14	0.16	3.374	A
4244E	1	2	428.15	107.04	428.15	700.94	0.611	0.53	0.95	8.756	A
4244E	2	1	613.33	153.33	614.07			0.06	0.03	0.334	A
4244S	1	1	354.07	88.52	357.04	710.49	0.498	0.45	0.61	6.504	A
4366	1	1	305.56	76.39	318.89	424.20	0.720	1.02	2.04	26.146	D
4547	1	1	593.89	148.47	576.11	926.87	0.641	0.60	1.42	7.037	A

Main results: (16:45-17:00)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	218.33	54.58	218.52	668.75	0.326	0.16	0.29	4.437	A
4244E	1	2	513.33	128.33	507.41	668.75	0.768	0.95	2.36	14.717	B
4244E	2	1	728.15	182.04	731.67			0.03	0.74	2.742	A
4244S	1	1	438.52	109.63	456.30	674.96	0.650	0.61	1.30	11.300	B
4366	1	1	382.59	95.65	362.78	396.41	0.965	2.04	7.84	62.379	F
4547	1	1	720.56	180.14	693.15	890.72	0.809	1.42	3.81	14.840	B

Main results: (17:00-17:15)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	209.44	52.36	208.89	675.42	0.310	0.29	0.30	4.754	A
4244E	1	2	525.00	131.25	518.33	675.42	0.777	2.36	2.39	15.868	C
4244E	2	1	730.19	182.55	734.44			0.74	0.63	3.886	A
4244S	1	1	445.00	111.25	441.85	673.00	0.661	1.30	1.32	11.949	B
4366	1	1	384.44	96.11	373.89	396.37	0.970	7.84	11.23	96.075	F
4547	1	1	704.81	176.20	694.44	885.12	0.796	3.81	3.15	15.797	C

Main results: (17:15-17:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	175.00	43.75	177.04	695.38	0.252	0.30	0.15	3.645	A
4244E	1	2	422.78	105.69	417.22	695.38	0.608	2.39	1.19	9.848	A
4244E	2	1	600.74	150.19	597.78			0.63	0.10	0.757	A
4244S	1	1	354.26	88.56	349.81	711.30	0.498	1.32	0.64	6.725	A
4366	1	1	307.59	76.90	322.22	425.74	0.722	11.23	3.80	64.020	F
4547	1	1	577.59	144.40	573.89	922.71	0.626	3.15	1.05	8.362	A

Main results: (17:30-17:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	142.04	35.51	143.15	718.02	0.198	0.15	0.10	2.922	A
4244E	1	2	347.78	86.94	342.04	718.02	0.484	1.19	0.68	6.427	A
4244E	2	1	490.00	122.50	489.81			0.10	0.00	0.147	A
4244S	1	1	309.26	77.31	303.33	737.92	0.419	0.64	0.45	4.923	A
4366	1	1	252.78	63.19	259.44	442.42	0.571	3.80	1.23	21.200	C
4547	1	1	476.48	119.12	475.19	958.52	0.497	1.05	0.73	4.511	A

Lanes: Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.81	0.12	2.941	A	A
4244E	1	2	9.10	0.61	6.187	A	A
4244E	2	1	0.25	0.02	0.122	A	A
4244S	1	1	5.51	0.37	4.530	A	A
4366	1	1	15.15	1.01	14.403	B	B
4547	1	1	8.50	0.57	4.239	A	A

Queueing Delay results: (16:30-16:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	2.50	0.17	3.374	A	A
4244E	1	2	15.48	1.03	8.756	A	A
4244E	2	1	0.84	0.06	0.334	A	A
4244S	1	1	9.38	0.63	6.504	A	A
4366	1	1	32.77	2.18	26.146	D	C
4547	1	1	16.58	1.11	7.037	A	A

Queueing Delay results: (16:45-17:00)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	3.98	0.27	4.437	A	A
4244E	1	2	31.36	2.09	14.717	B	B
4244E	2	1	8.22	0.55	2.742	A	A
4244S	1	1	20.07	1.34	11.300	B	B
4366	1	1	90.73	6.05	62.379	F	E
4547	1	1	42.85	2.86	14.840	B	B

Queueing Delay results: (17:00-17:15)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	4.32	0.29	4.754	A	A
4244E	1	2	34.37	2.29	15.868	C	B
4244E	2	1	12.01	0.80	3.886	A	A
4244S	1	1	21.49	1.43	11.949	B	B
4366	1	1	144.36	9.62	96.075	F	F
4547	1	1	46.45	3.10	15.797	C	B

Queueing Delay results: (17:15-17:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	2.71	0.18	3.645	A	A
4244E	1	2	17.90	1.19	9.848	A	A
4244E	2	1	2.01	0.13	0.757	A	A
4244S	1	1	9.92	0.66	6.725	A	A
4366	1	1	98.00	6.53	64.020	F	E
4547	1	1	20.63	1.38	8.362	A	A

Queueing Delay results: (17:30-17:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.82	0.12	2.922	A	A
4244E	1	2	9.78	0.65	6.427	A	A
4244E	2	1	0.32	0.02	0.147	A	A
4244S	1	1	6.16	0.41	4.923	A	A
4366	1	1	26.77	1.78	21.200	C	C
4547	1	1	9.26	0.62	4.511	A	A

Lanes: Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.14	0.00	0.00	0.00	0.79
4244E	1	2	0.53	0.00	0.00	1.33	2.49
4244E	2	1	0.06	0.00	0.00	0.00	0.00
4244S	1	1	0.45	0.00	0.00	1.37	2.34
4366	1	1	1.02	0.00	0.00	2.78	4.26
4547	1	1	0.60	0.00	0.00	1.77	3.25

Queue Variation results: (16:30-16:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.16	0.00	0.00	0.16	0.74
4244E	1	2	0.95	0.00	0.00	2.68	4.18
4244E	2	1	0.03	0.00	0.00	0.00	0.00
4244S	1	1	0.61	0.00	0.00	1.78	2.73
4366	1	1	2.04	0.00	0.46	5.62	7.56
4547	1	1	1.42	0.00	0.00	3.81	6.27

Queue Variation results: (16:45-17:00)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.29	0.00	0.00	0.72	1.49
4244E	1	2	2.36	0.00	1.33	6.00	6.00
4244E	2	1	0.74	0.00	0.00	1.83	5.36
4244S	1	1	1.30	0.00	0.00	3.48	5.63
4366	1	1	7.84	0.00	5.50	17.62	21.90
4547	1	1	3.81	0.00	2.03	9.47	11.70

Queue Variation results: (17:00-17:15)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.30	0.00	0.00	0.74	1.52
4244E	1	2	2.39	0.00	1.23	6.00	6.00
4244E	2	1	0.63	0.00	0.00	1.46	3.85
4244S	1	1	1.32	0.00	0.00	3.51	4.80
4366	1	1	11.23	0.00	8.22	24.20	32.20
4547	1	1	3.15	0.00	1.23	8.47	10.36

Queue Variation results: (17:15-17:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.15	0.00	0.00	0.17	0.77
4244E	1	2	1.19	0.00	0.00	3.80	6.00
4244E	2	1	0.10	0.00	0.00	0.00	0.00
4244S	1	1	0.64	0.00	0.00	1.69	2.40
4366	1	1	3.80	0.00	1.28	9.92	15.20
4547	1	1	1.05	0.00	0.00	2.97	4.16

Queue Variation results: (17:30-17:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.10	0.00	0.00	0.00	0.56
4244E	1	2	0.68	0.00	0.00	1.88	2.85
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	0.45	0.00	0.00	1.31	2.27
4366	1	1	1.23	0.00	0.00	3.06	4.43
4547	1	1	0.73	0.00	0.00	1.95	2.98

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A4244_B4547_ENTRY_LANE.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A4244 B4547\2018 DF
Report generation date: 14/06/2018 17:45:51

« (Default Analysis Set) - 2023 Secondary Base + Dev + Seasonality, PM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Direct/Resultant Flows
» Turning Proportions
» Vehicle Mix
» Results
» Lane Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 [Entry Lane Simulation] - 2023 Secondary Base + Dev + Seasonality			
Arm 4244E	1.96	9.85	N/A	A
Arm 4244S	1.41	10.15	N/A	B
Arm 4366	7.95	74.92	N/A	F
Arm 4547	1.98	11.27	N/A	B

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM" model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:15 - 17:45
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:15 - 17:45
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:15 - 17:45
"D8 - 2023 Base + Dev + Seasonality, PM Aug" model duration: 16:15 - 17:45
"D9 - 2023 Secondary Base + Dev, PM" model duration: 16:15 - 17:45
"D10 - 2023 Secondary Base + Dev + Seasonality, PM " model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 17:45:49

File summary

Title	(untitled)
Location	
Site Number	
Date	17/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

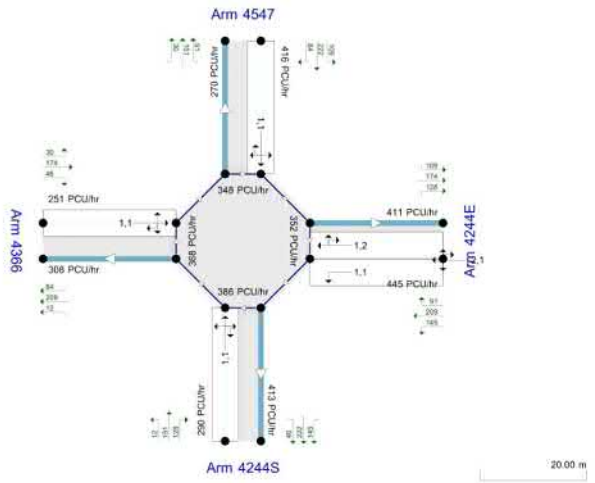
Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Entry Lane Analysis Options

Stop Criteria (%)	Random Seed	Results Refresh Speed (s)	Individual Vehicle Animation Number Of Trials	Time Step Size (s)	Last Run Random Seed	Last Run Number Of Trials
5.00	-1	3	1	10	518280428	451



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2023 Secondary Base + Dev + Seasonality, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	Entry Lane Simulation		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Rel
2023 Secondary Base + Dev + Seasonality, PM	2023 Secondary Base + Dev + Seasonality	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	A4244 B4547 B4366	Roundabout	4244E,4244S,4366,4547			22.01	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
4244E	4244E	(untitled)	
4244S	4244S	(untitled)	
4366	4366	(untitled)	
4547	4547	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
4244E	0.00	99999.00
4244S	0.00	99999.00
4366	0.00	99999.00
4547	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
4244E	3.00	10.00	18.00	25.00	48.00	40.00	
4244S	5.00	6.40	7.30	15.00	48.00	56.00	
4366	4.00	5.00	15.00	40.00	48.00	26.00	
4547	3.00	5.50	10.00	41.00	48.00	23.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
4244E		(calculated)	(calculated)	0.630	1807.798
4244S		(calculated)	(calculated)	0.565	1588.495
4366		(calculated)	(calculated)	0.593	1517.753
4547		(calculated)	(calculated)	0.573	1395.442

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
4244E	Percentage			90.00
4244S	Percentage			55.00
4366	Percentage			35.00
4547	Percentage			80.00

Entry Lane Analysis: Arm options

Arm	Lane Capacity Source	Traffic Considering Secondary Lanes (%)
4244E	Evenly split	10.00
4244S	Evenly split	10.00
4366	Evenly split	10.00
4547	Evenly split	10.00

Lanes

Arm	Lane Level	Lane	Has Limited Storage	Storage (PCU)	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
4244E	**1**	1	✓	6.00	0.00	99999.00
4244E	**1**	2	✓	6.00	0.00	99999.00
4244E	**2**	1		Infinity		
4244S	**1**	1		Infinity	0.00	99999.00
4366	**1**	1		Infinity	0.00	99999.00
4547	**1**	1		Infinity	0.00	99999.00

Entry Lane slope and intercept

Arm	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
4244E	(calculated)	(calculated)	0.315	903.899
4244E	(calculated)	(calculated)	0.315	903.899
4244S	(calculated)	(calculated)	0.565	1588.495
4366	(calculated)	(calculated)	0.593	1517.753
4547	(calculated)	(calculated)	0.573	1395.442

Lane Movements

Junction	Arm	Lane Level	Lane	Arm			
				4244E	4244S	4366	4547
1	**4244E**	**1**	**1**		✓		
1	**4244E**	**1**	**2**	✓		✓	✓
1	**4244E**	**2**	**1**	✓	✓	✓	✓
1	**4244S**	**1**	**1**	✓	✓	✓	✓
1	**4366**	**1**	**1**	✓	✓	✓	✓
1	**4547**	**1**	**1**	✓	✓	✓	✓

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
4244E	ONE HOUR	✓	596.00	100.000
4244S	ONE HOUR	✓	389.00	100.000
4366	ONE HOUR	✓	345.00	100.000
4547	ONE HOUR	✓	565.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	**4244E**	448.70	448.70		
16:15-16:30	**4244S**	292.86	292.86		
16:15-16:30	**4366**	259.73	259.73		
16:15-16:30	**4547**	425.36	425.36		
16:30-16:45	**4244E**	535.79	535.79		
16:30-16:45	**4244S**	349.70	349.70		
16:30-16:45	**4366**	310.15	310.15		
16:30-16:45	**4547**	507.92	507.92		
16:45-17:00	**4244E**	656.21	656.21		
16:45-17:00	**4244S**	428.30	428.30		
16:45-17:00	**4366**	379.85	379.85		
16:45-17:00	**4547**	622.08	622.08		
17:00-17:15	**4244E**	656.21	656.21		
17:00-17:15	**4244S**	428.30	428.30		
17:00-17:15	**4366**	379.85	379.85		
17:00-17:15	**4547**	622.08	622.08		
17:15-17:30	**4244E**	535.79	535.79		
17:15-17:30	**4244S**	349.70	349.70		
17:15-17:30	**4366**	310.15	310.15		
17:15-17:30	**4547**	507.92	507.92		
17:30-17:45	**4244E**	448.70	448.70		
17:30-17:45	**4244S**	292.86	292.86		
17:30-17:45	**4366**	259.73	259.73		
17:30-17:45	**4547**	425.36	425.36		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.000	197.000	276.000	123.000
	4244S	172.000	0.000	16.000	201.000
	4366	241.000	62.000	0.000	42.000
	4547	155.000	291.000	119.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.00	0.33	0.46	0.21
	4244S	0.44	0.00	0.04	0.52
	4366	0.70	0.18	0.00	0.12
	4547	0.27	0.52	0.21	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	1.000	1.000	1.000	1.000
	4244S	1.000	1.000	1.000	1.000
	4366	1.000	1.000	1.000	1.000
	4547	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		4244E	4244S	4366	4547
From	4244E	0.0	0.0	0.0	0.0
	4244S	0.0	0.0	0.0	0.0
	4366	0.0	0.0	0.0	0.0
	4547	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)
4244E	9.85	1.96	6.29	A	550.02	825.03	96.91	7.05	1.08
4244S	10.15	1.41	5.15	B	362.26	543.39	64.84	7.16	0.72
4366	74.92	7.95	22.23	F	312.11	468.16	309.25	39.63	3.44
4547	11.27	1.98	7.09	B	514.50	771.75	92.97	7.23	1.03

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	445.14	111.29	445.14	411.49	352.28	0.00	0.53	4.435	A
4244S	290.02	72.51	290.42	412.82	385.68	0.00	0.35	4.391	A
4366	257.03	64.26	250.51	308.12	367.98	0.00	1.06	14.072	B
4547	417.87	104.47	415.74	270.47	348.03	0.00	0.41	3.608	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	532.82	133.20	532.02	488.25	411.88	0.00	0.86	5.804	A
4244S	346.83	86.71	350.16	483.99	460.71	0.00	0.47	5.825	A
4366	307.18	76.80	286.56	360.27	450.60	0.00	1.94	22.806	C
4547	496.10	124.02	494.10	331.13	406.03	0.00	0.67	5.369	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	651.88	162.97	653.35	613.17	516.85	0.86	1.65	9.423	A
4244S	440.49	110.12	435.03	589.89	586.03	0.47	1.33	10.155	B
4366	374.10	93.53	369.84	466.70	554.37	1.94	6.79	52.533	F
4547	609.05	152.26	618.36	412.55	511.66	0.67	1.69	9.994	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	669.05	167.26	668.25	637.38	534.15	1.65	1.96	9.854	A
4244S	452.20	113.05	438.49	620.22	572.20	1.33	1.41	10.106	B
4366	363.99	91.00	383.15	461.11	549.58	6.79	7.95	74.917	F
4547	618.23	154.56	637.25	398.45	534.28	1.69	1.98	11.268	B

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	548.91	137.23	547.85	520.58	421.33	1.96	0.98	6.426	A
4244S	342.84	85.71	340.18	491.71	471.75	1.41	0.58	6.393	A
4366	309.31	77.33	321.29	378.49	433.44	7.95	2.09	35.847	E
4547	508.87	127.22	507.14	319.96	434.77	1.98	0.85	6.359	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	452.33	113.08	451.53	426.78	369.05	0.98	0.67	4.534	A
4244S	301.20	75.30	300.53	421.60	403.24	0.58	0.33	4.415	A
4366	261.02	65.25	261.42	322.08	381.69	2.09	1.11	15.211	C
4547	436.90	109.22	437.83	285.10	358.00	0.85	0.42	3.780	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	8.23	0.55	4.435	A	A
4244S	5.34	0.36	4.391	A	A
4366	14.83	0.99	14.072	B	B
4547	6.40	0.43	3.608	A	A

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	12.83	0.86	5.804	A	A
4244S	8.49	0.57	5.825	A	A
4366	28.99	1.93	22.806	C	C
4547	11.25	0.75	5.369	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	25.50	1.70	9.423	A	A
4244S	17.94	1.20	10.155	B	B
4366	76.82	5.12	52.533	F	D
4547	25.65	1.71	9.994	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	26.92	1.79	9.854	A	A
4244S	18.10	1.21	10.106	B	B
4366	117.03	7.80	74.917	F	E
4547	29.07	1.94	11.268	B	B

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	14.68	0.98	6.426	A	A
4244S	9.49	0.63	6.393	A	A
4366	54.01	3.60	35.847	E	D
4547	13.77	0.92	6.359	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	8.75	0.58	4.534	A	A
4244S	5.50	0.37	4.415	A	A
4366	17.57	1.17	15.211	C	B
4547	6.85	0.46	3.780	A	A

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.53	0.00	0.00	1.45	2.19
4244S	0.35	0.00	0.00	0.98	1.74
4366	1.06	0.00	0.00	2.79	3.87
4547	0.41	0.00	0.00	1.26	2.15

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.86	0.00	0.00	2.30	3.46
4244S	0.47	0.00	0.00	1.30	2.11
4366	1.94	0.00	0.53	4.99	6.94
4547	0.67	0.00	0.00	1.91	3.22

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1.65	0.00	0.43	3.87	5.68
4244S	1.33	0.00	0.00	3.71	5.08
4366	6.79	0.00	4.35	15.18	19.78
4547	1.69	0.00	0.05	4.37	6.16

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1.96	0.00	0.67	4.50	6.29
4244S	1.41	0.00	0.00	3.73	5.15
4366	7.95	0.00	5.48	17.98	22.23
4547	1.98	0.00	0.26	4.99	7.09

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.98	0.00	0.00	2.60	3.67
4244S	0.58	0.00	0.00	1.60	2.70
4366	2.09	0.00	0.52	5.27	7.21
4547	0.85	0.00	0.00	2.60	4.03

Queue Variation results: (17:30-17:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	0.67	0.00	0.00	1.86	2.79
4244S	0.33	0.00	0.00	0.81	1.71
4366	1.11	0.00	0.00	2.72	4.18
4547	0.42	0.00	0.00	1.16	2.13

Lane Results

Lanes: Main Results for each time segment

Main results: (16:15-16:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	145.14	36.29	144.61	713.59	0.203	0.00	0.10	2.933	A
4244E	1	2	300.00	75.00	301.60	713.59	0.420	0.00	0.43	5.149	A
4244E	2	1	445.14	111.29	445.14			0.00	0.00	0.018	A
4244S	1	1	290.02	72.51	290.42	753.92	0.385	0.00	0.35	4.391	A
4366	1	1	257.03	64.26	250.51	454.83	0.565	0.00	1.06	14.072	B
4547	1	1	417.87	104.47	415.74	956.88	0.437	0.00	0.41	3.608	A

Main results: (16:30-16:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	166.83	41.71	166.70	696.68	0.239	0.10	0.18	3.632	A
4244E	1	2	365.19	91.30	366.12	696.68	0.524	0.43	0.67	6.768	A
4244E	2	1	532.82	133.20	532.02			0.00	0.02	0.070	A
4244S	1	1	346.83	86.71	350.16	730.63	0.475	0.35	0.47	5.825	A
4366	1	1	307.18	76.80	286.56	437.68	0.702	1.06	1.94	22.806	C
4547	1	1	496.10	124.02	494.10	930.30	0.533	0.41	0.67	5.369	A

Main results: (16:45-17:00)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	205.81	51.45	205.54	666.91	0.309	0.18	0.28	4.602	A
4244E	1	2	447.54	111.88	453.53	666.91	0.671	0.67	1.25	10.742	B
4244E	2	1	651.88	162.97	653.35			0.02	0.12	0.698	A
4244S	1	1	440.49	110.12	435.03	691.71	0.637	0.47	1.33	10.155	B
4366	1	1	374.10	93.53	369.84	416.14	0.899	1.94	6.79	52.533	F
4547	1	1	609.05	152.26	618.36	881.89	0.691	0.67	1.69	9.994	A

Main results: (17:00-17:15)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	220.98	55.24	218.31	662.00	0.334	0.28	0.31	4.488	A
4244E	1	2	447.27	111.82	439.96	662.00	0.676	1.25	1.47	11.091	B
4244E	2	1	669.05	167.26	668.25			0.12	0.17	0.945	A
4244S	1	1	452.20	113.05	438.49	696.01	0.650	1.33	1.41	10.106	B
4366	1	1	363.99	91.00	383.15	417.14	0.873	6.79	7.95	74.917	F
4547	1	1	618.23	154.56	637.25	871.53	0.709	1.69	1.98	11.268	B

Main results: (17:15-17:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	185.45	46.36	179.73	694.00	0.267	0.31	0.24	3.575	A
4244E	1	2	362.39	90.60	362.39	694.00	0.522	1.47	0.71	7.534	A
4244E	2	1	548.91	137.23	547.85			0.17	0.03	0.235	A
4244S	1	1	342.84	85.71	340.18	727.20	0.471	1.41	0.58	6.393	A
4366	1	1	309.31	77.33	321.29	441.24	0.701	7.95	2.09	35.847	E
4547	1	1	508.87	127.22	507.14	917.13	0.555	1.98	0.85	6.359	A

Main results: (17:30-17:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
4244E	1	1	143.02	35.75	145.14	708.83	0.202	0.24	0.10	2.815	A
4244E	1	2	308.51	77.13	310.64	708.83	0.435	0.71	0.54	5.347	A
4244E	2	1	452.33	113.08	451.53			0.03	0.03	0.030	A
4244S	1	1	301.20	75.30	300.53	748.47	0.402	0.58	0.33	4.415	A
4366	1	1	261.02	65.25	261.42	451.99	0.577	2.09	1.11	15.211	C
4547	1	1	436.90	109.22	437.83	952.30	0.459	0.85	0.42	3.780	A

Lanes: Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.79	0.12	2.933	A	A
4244E	1	2	6.40	0.43	5.149	A	A
4244E	2	1	0.03	0.00	0.018	A	A
4244S	1	1	5.34	0.36	4.391	A	A
4366	1	1	14.83	0.99	14.072	B	B
4547	1	1	6.40	0.43	3.608	A	A

Queueing Delay results: (16:30-16:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	2.66	0.18	3.632	A	A
4244E	1	2	10.01	0.67	6.768	A	A
4244E	2	1	0.16	0.01	0.070	A	A
4244S	1	1	8.49	0.57	5.825	A	A
4366	1	1	28.99	1.93	22.806	C	C
4547	1	1	11.25	0.75	5.369	A	A

Queueing Delay results: (16:45-17:00)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	4.14	0.28	4.602	A	A
4244E	1	2	19.47	1.30	10.742	B	B
4244E	2	1	1.89	0.13	0.698	A	A
4244S	1	1	17.94	1.20	10.155	B	B
4366	1	1	76.82	5.12	52.533	F	D
4547	1	1	25.65	1.71	9.994	A	A

Queueing Delay results: (17:00-17:15)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	4.07	0.27	4.488	A	A
4244E	1	2	20.29	1.35	11.091	B	B
4244E	2	1	2.56	0.17	0.945	A	A
4244S	1	1	18.10	1.21	10.106	B	B
4366	1	1	117.03	7.80	74.917	F	E
4547	1	1	29.07	1.94	11.268	B	B

Queueing Delay results: (17:15-17:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	2.67	0.18	3.575	A	A
4244E	1	2	11.44	0.76	7.534	A	A
4244E	2	1	0.57	0.04	0.235	A	A
4244S	1	1	9.49	0.63	6.393	A	A
4366	1	1	54.01	3.60	35.847	E	D
4547	1	1	13.77	0.92	6.359	A	A

Queueing Delay results: (17:30-17:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
4244E	1	1	1.77	0.12	2.815	A	A
4244E	1	2	6.91	0.46	5.347	A	A
4244E	2	1	0.07	0.00	0.030	A	A
4244S	1	1	5.50	0.37	4.415	A	A
4366	1	1	17.57	1.17	15.211	C	B
4547	1	1	6.85	0.46	3.780	A	A

Lanes: Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.10	0.00	0.00	0.00	0.39
4244E	1	2	0.43	0.00	0.00	1.13	1.88
4244E	2	1	0.00	0.00	0.00	0.00	0.00
4244S	1	1	0.35	0.00	0.00	0.98	1.74
4366	1	1	1.06	0.00	0.00	2.79	3.87
4547	1	1	0.41	0.00	0.00	1.26	2.15

Queue Variation results: (16:30-16:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.18	0.00	0.00	0.21	0.80
4244E	1	2	0.67	0.00	0.00	1.93	3.05
4244E	2	1	0.02	0.00	0.00	0.00	0.00
4244S	1	1	0.47	0.00	0.00	1.30	2.11
4366	1	1	1.94	0.00	0.53	4.99	6.94
4547	1	1	0.67	0.00	0.00	1.91	3.22

Queue Variation results: (16:45-17:00)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.28	0.00	0.00	0.66	1.25
4244E	1	2	1.25	0.00	0.00	3.52	6.00
4244E	2	1	0.12	0.00	0.00	0.00	0.00
4244S	1	1	1.33	0.00	0.00	3.71	5.08
4366	1	1	6.79	0.00	4.35	15.18	19.78
4547	1	1	1.69	0.00	0.05	4.37	6.16

Queue Variation results: (17:00-17:15)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.31	0.00	0.00	0.80	1.48
4244E	1	2	1.47	0.00	0.18	3.99	6.00
4244E	2	1	0.17	0.00	0.00	0.00	0.00
4244S	1	1	1.41	0.00	0.00	3.73	5.15
4366	1	1	7.95	0.00	5.48	17.98	22.23
4547	1	1	1.86	0.00	0.26	4.99	7.09

Queue Variation results: (17:15-17:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.24	0.00	0.00	0.51	1.26
4244E	1	2	0.71	0.00	0.00	1.97	3.04
4244E	2	1	0.03	0.00	0.00	0.00	0.00
4244S	1	1	0.58	0.00	0.00	1.60	2.70
4366	1	1	2.09	0.00	0.52	5.27	7.21
4547	1	1	0.85	0.00	0.00	2.60	4.03

Queue Variation results: (17:30-17:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
4244E	1	1	0.10	0.00	0.00	0.00	0.42
4244E	1	2	0.54	0.00	0.00	1.66	2.60
4244E	2	1	0.03	0.00	0.00	0.00	0.00
4244S	1	1	0.33	0.00	0.00	0.81	1.71
4366	1	1	1.11	0.00	0.00	2.72	4.18
4547	1	1	0.42	0.00	0.00	1.16	2.13

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A5 - A4244 ENTRY LANE.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A5 - A4244 rbt\2018 DF
Report generation date: 14/06/2018 18:12:48

« (Default Analysis Set) - 2023 BASE + DEV + Seasonality, PM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Direct/Resultant Flows
» Turning Proportions
» Vehicle Mix
» Results
» Lane Results

Summary of junction performance

	PM				
	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS
	A1 [Entry Lane Simulation] - 2023 BASE + DEV + Seasonality				
Arm A5E	2.77	8.28	15.63	N/A	C
Arm A4244	3.17	13.28	15.31	N/A	C
Arm A5W	3.12	11.18	6.26	N/A	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017, AM" model duration: 07:45 - 09:15
"D2 - 2017, PM" model duration: 16:15 - 17:45
"D3 - 2023 BASE, AM" model duration: 07:45 - 09:15
"D4 - 2023 BASE, PM" model duration: 16:15 - 17:45
"D5 - 2023 BASE + DEV, AM" model duration: 07:45 - 09:15
"D6 - 2023 BASE + DEV, PM" model duration: 16:15 - 17:45
"D8 - 2023 BASE + DEV + Seasonality, PM " model duration: 16:15 - 17:45
"D13 - 2023 BASE Seasonality, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 18:12:46

File summary

Title	(untitled)
Location	
Site Number	
Date	28/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	RogersA2
Description	

Analysis Options

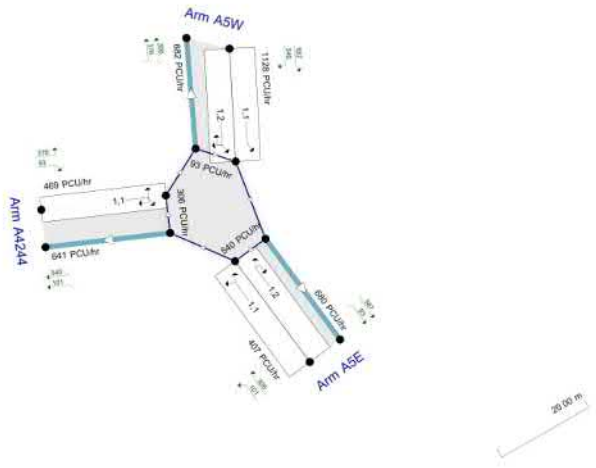
Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Entry Lane Analysis Options

Stop Criteria (%)	Random Seed	Results Refresh Speed (s)	Individual Vehicle Animation Number Of Trials	Time Step Size (s)	Last Run Random Seed	Last Run Number Of Trials
5.00	-1	3	1	10	1246113546	149



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2023 BASE + DEV + Seasonality, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	Entry Lane Simulation		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Rel
2023 BASE + DEV + Seasonality, PM	2023 BASE + DEV + Seasonality	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	A5 LLYS Y GWYNT	Roundabout	A5E,A4244,A5W			10.36	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
A5E	A5E	(untitled)	
A4244	A4244	(untitled)	
A5W	A5W	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
A5E	0.00	99999.00
A4244	0.00	99999.00
A5W	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A5E	3.75	3.75	0.00	35.00	35.00	39.00	
A4244	3.75	5.30	5.50	25.00	35.00	25.00	
A5W	7.45	8.50	4.10	28.00	35.00	33.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A5E		(calculated)	(calculated)	0.532	1124.577
A4244		(calculated)	(calculated)	0.603	1420.724
A5W		(calculated)	(calculated)	0.803	2440.867

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
A5E	Percentage			120.00
A4244	Percentage			80.00
A5W	None			

Entry Lane Analysis: Arm options

Arm	Lane Capacity Source	Traffic Considering Secondary Lanes (%)
A5E	Evenly split	10.00
A4244	Evenly split	10.00
A5W	Evenly split	10.00

Lanes

Arm	Lane Level	Lane	Has Limited Storage	Storage (PCU)	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
A5E	1	1		Infinity	0.00	99999.00
A5E	1	2		Infinity	0.00	99999.00
A4244	1	1		Infinity	0.00	99999.00
A5W	1	1		Infinity	0.00	99999.00
A5W	1	2		Infinity	0.00	99999.00

Entry Lane slope and intercept

Arm	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A5E	(calculated)	(calculated)	0.266	562.289
A5E	(calculated)	(calculated)	0.266	562.289
A4244	(calculated)	(calculated)	0.603	1420.724
A5W	(calculated)	(calculated)	0.401	1220.433
A5W	(calculated)	(calculated)	0.401	1220.433

Lane Movements

Junction	Arm	Lane Level	Lane	Arm		
				A5E	A4244	A5W
1	A5E	1	1		✓	✓
1	A5E	1	2	✓		✓
1	A4244	1	1	✓	✓	✓
1	A5W	1	1	✓		
1	A5W	1	2	✓	✓	✓

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A5E	ONE HOUR	✓	536.00	100.000
A4244	ONE HOUR	✓	653.00	100.000
A5W	ONE HOUR	✓	1468.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	A5E	403.53	403.53		
16:15-16:30	A4244	491.61	491.61		
16:15-16:30	A5W	1105.19	1105.19		
16:30-16:45	A5E	481.85	481.85		
16:30-16:45	A4244	587.03	587.03		
16:30-16:45	A5W	1319.70	1319.70		
16:45-17:00	A5E	590.15	590.15		
16:45-17:00	A4244	718.97	718.97		
16:45-17:00	A5W	1616.30	1616.30		
17:00-17:15	A5E	590.15	590.15		
17:00-17:15	A4244	718.97	718.97		
17:00-17:15	A5W	1616.30	1616.30		
17:15-17:30	A5E	481.85	481.85		
17:15-17:30	A4244	587.03	587.03		
17:15-17:30	A5W	1319.70	1319.70		
17:30-17:45	A5E	403.53	403.53		
17:30-17:45	A4244	491.61	491.61		
17:30-17:45	A5W	1105.19	1105.19		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	0.000	118.000	418.000
	A4244	136.000	0.000	517.000
	A5W	765.000	703.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	0.00	0.22	0.78
	A4244	0.21	0.00	0.79
	A5W	0.52	0.48	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	1.000	1.000	1.000
	A4244	1.000	1.000	1.000
	A5W	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	0.0	0.0	0.0
	A4244	0.0	0.0	0.0
	A5W	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)
A5E	15.63	2.77	8.28	C	494.77	742.15	130.90	10.58	1.45
A4244	15.31	3.17	13.28	C	599.46	899.19	138.16	9.22	1.54
A5W	6.26	3.12	11.18	A	1356.64	2034.97	147.07	4.34	1.63

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	400.27	100.07	406.71	680.13	540.40	0.00	0.65	5.684	A
A4244	474.36	118.59	468.72	641.07	306.04	0.00	0.64	4.013	A
A5W	1135.57	283.89	1127.52	681.74	93.02	0.00	0.80	2.298	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	477.99	119.50	488.05	790.07	641.88	0.00	0.93	8.341	A
A4244	598.79	149.70	594.77	737.32	392.62	0.00	0.95	6.770	A
A5W	1318.39	329.60	1316.78	872.21	115.17	0.00	1.32	3.694	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	587.92	146.98	577.85	1023.22	745.37	0.93	2.72	15.438	C
A4244	683.76	170.94	697.45	866.98	456.24	0.95	3.17	13.996	B
A5W	1640.13	410.03	1623.62	1008.72	144.97	1.32	3.12	6.249	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	616.51	154.13	595.57	983.36	773.56	2.72	2.77	15.626	C
A4244	721.21	180.30	738.52	912.08	457.05	3.17	2.61	15.309	C
A5W	1597.05	399.26	1598.26	1036.91	158.66	3.12	2.57	6.259	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	482.01	120.50	478.79	804.56	682.15	2.77	1.15	8.818	A
A4244	613.29	153.32	611.68	788.86	372.08	2.61	1.13	7.189	A
A5W	1347.38	336.85	1363.89	860.94	122.82	2.57	1.38	3.683	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	403.89	100.97	397.85	664.43	533.96	1.15	0.73	6.147	A
A4244	505.37	126.34	496.51	622.55	309.26	1.13	0.58	4.049	A
A5W	1101.34	275.34	1091.68	699.06	106.71	1.38	0.91	2.480	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	9.42	0.63	5.684	A	A
A4244	8.14	0.54	4.013	A	A
A5W	10.50	0.70	2.298	A	A

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	16.64	1.11	8.341	A	A
A4244	16.57	1.10	6.770	A	A
A5W	20.33	1.36	3.694	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	37.70	2.51	15.438	C	B
A4244	40.79	2.72	13.996	B	B
A5W	41.75	2.78	6.249	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	38.09	2.54	15.626	C	B
A4244	46.34	3.09	15.309	C	B
A5W	42.37	2.82	6.259	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	18.36	1.22	8.818	A	A
A4244	17.80	1.19	7.189	A	A
A5W	20.48	1.37	3.683	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	10.69	0.71	6.147	A	A
A4244	8.52	0.57	4.049	A	A
A5W	11.64	0.78	2.480	A	A

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	0.65	0.00	0.00	1.67	2.43
A4244	0.64	0.00	0.00	2.01	2.84
A5W	0.80	0.00	0.00	2.18	3.36

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	0.93	0.00	0.00	2.02	3.32
A4244	0.95	0.00	0.00	2.83	4.11
A5W	1.32	0.00	0.05	2.94	4.59

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	2.72	0.00	1.75	5.85	6.62
A4244	3.17	0.00	0.66	9.03	13.28
A5W	3.12	0.00	1.24	7.53	11.18

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	2.77	0.00	1.40	6.52	8.28
A4244	2.61	0.00	1.14	6.22	8.28
A5W	2.57	0.00	1.34	6.28	8.28

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1.15	0.00	0.08	2.82	4.39
A4244	1.13	0.00	0.00	3.03	4.59
A5W	1.38	0.00	0.00	3.68	4.85

Queue Variation results: (17:30-17:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	0.73	0.00	0.00	1.69	2.51
A4244	0.58	0.00	0.00	1.74	2.71
A5W	0.91	0.00	0.00	2.44	3.44

Lane Results

Lanes: Main Results for each time segment

Main results: (16:15-16:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	224.70	56.17	230.34	502.31	0.447	0.00	0.38	6.112	A
A5E	1	2	175.57	43.89	176.38	502.31	0.350	0.00	0.27	5.141	A
A4244	1	1	474.36	118.59	468.72	988.87	0.480	0.00	0.64	4.013	A
A5W	1	1	417.58	104.40	420.40	1183.10	0.353	0.00	0.14	1.310	A
A5W	1	2	717.99	179.50	707.11	1183.10	0.607	0.00	0.66	2.886	A

Main results: (16:30-16:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	266.98	66.74	270.20	469.94	0.568	0.38	0.60	9.056	A
A5E	1	2	211.01	52.75	217.85	469.94	0.449	0.27	0.33	7.483	A
A4244	1	1	598.79	149.70	594.77	947.09	0.632	0.64	0.95	6.770	A
A5W	1	1	514.63	128.66	507.79	1174.20	0.438	0.14	0.29	1.971	A
A5W	1	2	803.76	200.94	808.99	1174.20	0.685	0.66	1.03	4.788	A

Main results: (16:45-17:00)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	312.89	78.22	310.47	436.91	0.716	0.60	1.48	16.609	C
A5E	1	2	275.03	68.76	267.38	436.91	0.629	0.33	1.23	14.119	B
A4244	1	1	683.76	170.94	697.45	916.38	0.746	0.95	3.17	13.996	B
A5W	1	1	692.62	173.15	695.44	1162.24	0.596	0.29	0.67	3.598	A
A5W	1	2	947.52	236.88	928.19	1162.24	0.815	1.03	2.45	8.137	A

Main results: (17:00-17:15)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	317.72	79.43	318.93	427.92	0.742	1.48	1.48	16.743	C
A5E	1	2	298.79	74.70	276.64	427.92	0.698	1.23	1.29	14.360	B
A4244	1	1	721.21	180.30	738.52	915.99	0.787	3.17	2.61	15.309	C
A5W	1	1	657.18	164.30	652.75	1156.75	0.568	0.67	0.63	3.495	A
A5W	1	2	939.87	234.97	945.50	1156.75	0.813	2.45	1.94	8.219	A

Main results: (17:15-17:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	264.56	66.14	262.55	457.09	0.579	1.48	0.66	9.272	A
A5E	1	2	217.45	54.36	216.24	457.09	0.476	1.29	0.48	8.262	A
A4244	1	1	613.29	153.32	611.68	957.00	0.641	2.61	1.13	7.189	A
A5W	1	1	519.06	129.77	521.48	1171.13	0.443	0.63	0.32	2.055	A
A5W	1	2	828.32	207.08	842.42	1171.13	0.707	1.94	1.05	4.734	A

Main results: (17:30-17:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	224.30	56.07	222.28	504.37	0.445	0.66	0.44	6.552	A
A5E	1	2	179.60	44.90	175.57	504.37	0.356	0.48	0.29	5.632	A
A4244	1	1	505.37	126.34	496.51	987.32	0.512	1.13	0.58	4.049	A
A5W	1	1	396.64	99.16	394.63	1177.60	0.337	0.32	0.21	1.400	A
A5W	1	2	704.70	176.17	697.05	1177.60	0.598	1.05	0.70	3.127	A

Lanes: Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	5.68	0.38	6.112	A	A
A5E	1	2	3.74	0.25	5.141	A	A
A4244	1	1	8.14	0.54	4.013	A	A
A5W	1	1	2.24	0.15	1.310	A	A
A5W	1	2	8.26	0.55	2.886	A	A

Queueing Delay results: (16:30-16:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	9.84	0.66	9.056	A	A
A5E	1	2	6.80	0.45	7.483	A	A
A4244	1	1	16.57	1.10	6.770	A	A
A5W	1	1	4.22	0.28	1.971	A	A
A5W	1	2	16.10	1.07	4.788	A	A

Queueing Delay results: (16:45-17:00)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	21.53	1.44	16.609	C	B
A5E	1	2	16.17	1.08	14.119	B	B
A4244	1	1	40.79	2.72	13.996	B	B
A5W	1	1	10.03	0.67	3.598	A	A
A5W	1	2	31.72	2.11	8.137	A	A

Queueing Delay results: (17:00-17:15)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	21.65	1.44	16.743	C	B
A5E	1	2	16.44	1.10	14.360	B	B
A4244	1	1	46.34	3.09	15.309	C	B
A5W	1	1	9.80	0.65	3.495	A	A
A5W	1	2	32.57	2.17	8.219	A	A

Queueing Delay results: (17:15-17:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	10.62	0.71	9.272	A	A
A5E	1	2	7.74	0.52	8.262	A	A
A4244	1	1	17.80	1.19	7.189	A	A
A5W	1	1	4.46	0.30	2.055	A	A
A5W	1	2	16.03	1.07	4.734	A	A

Queueing Delay results: (17:30-17:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	6.37	0.42	6.552	A	A
A5E	1	2	4.32	0.29	5.632	A	A
A4244	1	1	8.52	0.57	4.049	A	A
A5W	1	1	2.47	0.16	1.400	A	A
A5W	1	2	9.17	0.61	3.127	A	A

Lanes: Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.38	0.00	0.00	0.87	1.39
A5E	1	2	0.27	0.00	0.00	0.71	1.22
A4244	1	1	0.64	0.00	0.00	2.01	2.84
A5W	1	1	0.14	0.00	0.00	0.15	0.68
A5W	1	2	0.66	0.00	0.00	2.01	2.84

Queue Variation results: (16:30-16:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.60	0.00	0.00	1.58	2.19
A5E	1	2	0.33	0.00	0.00	0.87	1.46
A4244	1	1	0.95	0.00	0.00	2.83	4.11
A5W	1	1	0.29	0.00	0.00	0.81	1.46
A5W	1	2	1.03	0.00	0.00	2.67	3.89

Queue Variation results: (16:45-17:00)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	1.48	0.00	0.73	2.97	3.66
A5E	1	2	1.23	0.00	0.35	2.81	3.36
A4244	1	1	3.17	0.00	0.66	9.03	13.28
A5W	1	1	0.67	0.00	0.00	2.14	3.14
A5W	1	2	2.45	0.00	0.80	6.28	8.18

Queue Variation results: (17:00-17:15)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	1.48	0.00	0.54	3.23	4.18
A5E	1	2	1.29	0.00	0.09	3.12	3.70
A4244	1	1	2.61	0.00	1.14	6.22	8.28
A5W	1	1	0.63	0.00	0.00	2.14	3.08
A5W	1	2	1.94	0.00	0.76	4.89	6.71

Queue Variation results: (17:15-17:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.66	0.00	0.00	1.47	2.18
A5E	1	2	0.48	0.00	0.00	1.01	1.89
A4244	1	1	1.13	0.00	0.00	3.03	4.59
A5W	1	1	0.32	0.00	0.00	0.93	1.66
A5W	1	2	1.05	0.00	0.00	2.85	4.18

Queue Variation results: (17:30-17:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.44	0.00	0.00	1.16	1.73
A5E	1	2	0.29	0.00	0.00	0.70	0.91
A4244	1	1	0.58	0.00	0.00	1.74	2.71
A5W	1	1	0.21	0.00	0.00	0.39	0.91
A5W	1	2	0.70	0.00	0.00	1.94	2.83

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]

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Filename: A5 - A4244 ENTRY LANE.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A5 - A4244 rbt\2018 DF
Report generation date: 14/06/2018 17:49:57

« (Default Analysis Set) - 2017, AM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Direct/Resultant Flows
» Turning Proportions
» Vehicle Mix
» Results
» Lane Results

Summary of junction performance

	AM				
	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS
	A1 [Entry Lane Simulation] - 2017				
Arm A5E	5.13	15.05	20.98	N/A	C
Arm A4244	9.39	29.53	47.16	N/A	E
Arm A5W	0.23	1.10	1.15	N/A	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017, AM " model duration: 07:45 - 09:15
"D2 - 2017, PM" model duration: 16:15 - 17:45
"D3 - 2023 BASE, AM" model duration: 07:45 - 09:15
"D4 - 2023 BASE, PM" model duration: 16:15 - 17:45
"D5 - 2023 BASE + DEV, AM" model duration: 07:45 - 09:15
"D6 - 2023 BASE + DEV, PM" model duration: 16:15 - 17:45
"D8 - 2023 BASE + DEV + Seasonality, PM" model duration: 16:15 - 17:45
"D9 - Secondary 2023 BASE + DEV, AM" model duration: 07:45 - 09:15
"D11 - Secondary 2023 BASE + DEV + Seasonality, PM" model duration: 16:15 - 17:45
"D13 - 2023 BASE Seasonality, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 17:49:55

File summary

Title	(untitled)
Location	
Site Number	
Date	28/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	RogersA2
Description	

Analysis Options

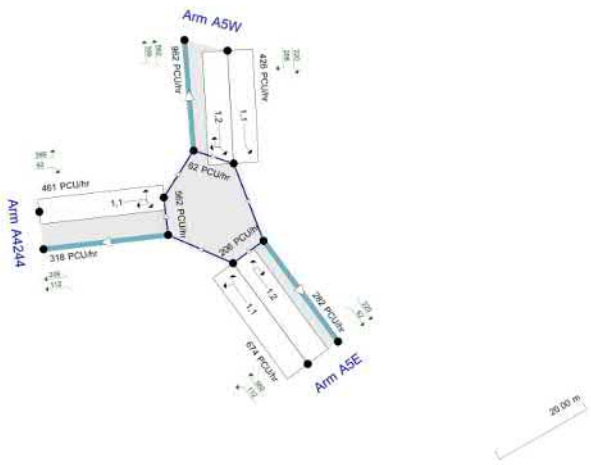
Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Entry Lane Analysis Options

Stop Criteria (%)	Random Seed	Results Refresh Speed (s)	Individual Vehicle Animation Number Of Trials	Time Step Size (s)	Last Run Random Seed	Last Run Number Of Trials
5.00	-1	3	1	10	761331781	359



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	Entry Lane Simulation		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017, AM	2017	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	A5 LLYS Y GWYNT	Roundabout	A5E,A4244,A5W			23.30	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
A5E	A5E	(untitled)	
A4244	A4244	(untitled)	
A5W	A5W	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
A5E	0.00	99999.00
A4244	0.00	99999.00
A5W	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A5E	3.75	3.75	0.00	35.00	35.00	39.00	
A4244	3.75	5.30	5.50	25.00	35.00	25.00	
A5W	7.45	8.50	4.10	28.00	35.00	33.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A5E		(calculated)	(calculated)	0.532	1124.577
A4244		(calculated)	(calculated)	0.603	1420.724
A5W		(calculated)	(calculated)	0.803	2440.867

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
A5E	Percentage			120.00
A4244	Percentage			80.00
A5W	None			

Entry Lane Analysis: Arm options

Arm	Lane Capacity Source	Traffic Considering Secondary Lanes (%)
A5E	Evenly split	10.00
A4244	Evenly split	10.00
A5W	Evenly split	10.00

Lanes

Arm	Lane Level	Lane	Has Limited Storage	Storage (PCU)	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
A5E	1	1		Infinity	0.00	99999.00
A5E	1	2		Infinity	0.00	99999.00
A4244	1	1		Infinity	0.00	99999.00
A5W	1	1		Infinity	0.00	99999.00
A5W	1	2		Infinity	0.00	99999.00

Entry Lane slope and intercept

Arm	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A5E	(calculated)	(calculated)	0.266	562.289
A5E	(calculated)	(calculated)	0.266	562.289
A4244	(calculated)	(calculated)	0.603	1420.724
A5W	(calculated)	(calculated)	0.401	1220.433
A5W	(calculated)	(calculated)	0.401	1220.433

Lane Movements

Junction	Arm	Lane Level	Lane	Arm		
				A5E	A4244	A5W
1	A5E	1	1		✓	✓
1	A5E	1	2	✓		✓
1	A4244	1	1	✓	✓	✓
1	A5W	1	1	✓		
1	A5W	1	2	✓	✓	✓

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A5E	ONE HOUR	✓	889.00	100.000
A4244	ONE HOUR	✓	605.00	100.000
A5W	ONE HOUR	✓	558.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A5E	669.29	669.29		
07:45-08:00	A4244	455.48	455.48		
07:45-08:00	A5W	420.09	420.09		
08:00-08:15	A5E	799.19	799.19		
08:00-08:15	A4244	543.88	543.88		
08:00-08:15	A5W	501.63	501.63		
08:15-08:30	A5E	978.81	978.81		
08:15-08:30	A4244	666.12	666.12		
08:15-08:30	A5W	614.37	614.37		
08:30-08:45	A5E	978.81	978.81		
08:30-08:45	A4244	666.12	666.12		
08:30-08:45	A5W	614.37	614.37		
08:45-09:00	A5E	799.19	799.19		
08:45-09:00	A4244	543.88	543.88		
08:45-09:00	A5W	501.63	501.63		
09:00-09:15	A5E	669.29	669.29		
09:00-09:15	A4244	455.48	455.48		
09:00-09:15	A5W	420.09	420.09		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	0.000	138.000	751.000
	A4244	82.000	0.000	523.000
	A5W	289.000	269.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	0.00	0.16	0.84
	A4244	0.14	0.00	0.86
	A5W	0.52	0.48	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	1.000	1.000	1.000
	A4244	1.000	1.000	1.000
	A5W	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	0.0	0.0	0.0
	A4244	0.0	0.0	0.0
	A5W	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)
A5E	20.98	5.13	15.05	C	809.47	1214.21	257.28	12.71	2.86
A4244	47.16	9.39	29.53	E	555.74	833.61	314.75	22.65	3.50
A5W	1.15	0.23	1.10	A	514.23	771.35	12.65	0.98	0.14

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	671.70	167.92	674.04	282.28	205.74	0.00	1.09	5.913	A
A4244	460.11	115.03	461.45	317.72	562.06	0.00	0.66	5.436	A
A5W	423.01	105.75	426.02	961.50	62.01	0.00	0.07	0.812	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	804.57	201.14	793.20	329.42	247.52	0.00	2.08	9.152	A
A4244	541.84	135.46	555.04	372.37	668.36	0.00	1.48	10.710	B
A5W	502.90	125.72	503.90	1150.36	73.04	0.00	0.11	0.946	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	965.52	241.38	970.70	410.64	296.32	2.08	5.13	18.213	C
A4244	658.83	164.71	646.13	455.77	811.25	1.48	8.22	35.062	E
A5W	620.56	155.14	618.89	1369.30	88.08	0.11	0.23	1.125	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	970.03	242.51	976.21	402.62	291.64	5.13	5.06	20.983	C
A4244	663.68	165.92	662.01	430.36	837.49	8.22	9.39	47.160	E
A5W	611.36	152.84	610.03	1415.26	84.23	0.23	0.23	1.150	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	791.20	197.80	789.19	345.63	245.68	5.06	2.01	10.060	B
A4244	553.37	138.34	554.71	370.86	664.01	9.39	1.64	18.122	C
A5W	513.93	128.48	514.09	1141.50	77.21	0.23	0.12	0.951	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	653.82	163.45	669.36	271.92	199.39	2.01	0.97	6.153	A
A4244	456.60	114.15	446.91	305.52	563.23	1.64	0.87	5.709	A
A5W	413.65	103.41	414.15	952.98	57.16	0.12	0.07	0.790	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	16.34	1.09	5.913	A	A
A4244	10.32	0.69	5.436	A	A
A5W	1.43	0.10	0.812	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	30.46	2.03	9.152	A	A
A4244	24.23	1.62	10.710	B	B
A5W	1.98	0.13	0.946	A	A

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	72.73	4.85	18.213	C	B
A4244	92.38	6.16	35.062	E	D
A5W	2.88	0.19	1.125	A	A

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	85.48	5.70	20.983	C	C
A4244	128.65	8.58	47.160	E	D
A5W	2.96	0.20	1.150	A	A

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	34.70	2.31	10.060	B	B
A4244	47.98	3.20	18.122	C	B
A5W	2.00	0.13	0.951	A	A

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	17.56	1.17	6.153	A	A
A4244	11.19	0.75	5.709	A	A
A5W	1.40	0.09	0.790	A	A

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1.09	0.00	0.09	2.60	3.57
A4244	0.66	0.00	0.00	1.93	2.89
A5W	0.07	0.00	0.00	0.00	0.24

Queue Variation results: (08:00-08:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	2.08	0.00	0.92	4.86	6.23
A4244	1.48	0.00	0.00	4.36	6.29
A5W	0.11	0.00	0.00	0.00	0.55

Queue Variation results: (08:15-08:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	5.13	0.00	2.66	12.18	14.76
A4244	8.22	0.00	4.76	20.05	27.05
A5W	0.23	0.00	0.00	0.53	1.00

Queue Variation results: (08:30-08:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	5.06	0.00	2.93	12.01	15.05
A4244	9.39	0.00	5.50	24.03	29.53
A5W	0.23	0.00	0.00	0.53	1.10

Queue Variation results: (08:45-09:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	2.01	0.00	0.79	4.54	6.76
A4244	1.64	0.00	0.25	4.21	6.21
A5W	0.12	0.00	0.00	0.60	0.60

Queue Variation results: (09:00-09:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	0.97	0.00	0.00	2.60	3.60
A4244	0.87	0.00	0.00	2.56	3.84
A5W	0.07	0.00	0.00	0.00	0.24

Lane Results

Lanes: Main Results for each time segment

Main results: (07:45-08:00)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	355.49	88.87	354.99	609.10	0.584	0.00	0.63	6.264	A
A5E	1	2	316.21	79.05	319.05	609.10	0.519	0.00	0.46	5.518	A
A4244	1	1	460.11	115.03	461.45	865.31	0.532	0.00	0.66	5.436	A
A5W	1	1	137.72	34.43	138.55	1195.54	0.115	0.00	0.01	0.523	A
A5W	1	2	285.29	71.32	287.47	1195.54	0.239	0.00	0.06	0.943	A

Main results: (08:00-08:15)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	419.83	104.96	410.97	595.77	0.705	0.63	1.19	9.693	A
A5E	1	2	384.74	96.18	382.23	595.77	0.646	0.46	0.90	8.567	A
A4244	1	1	541.84	135.46	555.04	814.01	0.666	0.66	1.48	10.710	B
A5W	1	1	159.28	39.82	159.78	1191.12	0.134	0.01	0.02	0.587	A
A5W	1	2	343.62	85.91	344.12	1191.12	0.288	0.06	0.09	1.119	A

Main results: (08:15-08:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	498.72	124.68	496.71	580.20	0.860	1.19	2.74	19.007	C
A5E	1	2	466.80	116.70	473.98	580.20	0.805	0.90	2.40	17.388	C
A4244	1	1	658.83	164.71	646.13	745.04	0.884	1.48	8.22	35.062	E
A5W	1	1	209.25	52.31	208.08	1185.08	0.177	0.02	0.05	0.658	A
A5W	1	2	411.31	102.83	410.81	1185.08	0.347	0.09	0.18	1.357	A

Main results: (08:30-08:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	486.35	121.59	486.35	581.69	0.836	2.74	2.71	21.649	C
A5E	1	2	483.68	120.92	489.86	581.69	0.832	2.40	2.35	20.289	C
A4244	1	1	663.68	165.92	662.01	732.38	0.906	8.22	9.39	47.160	E
A5W	1	1	206.74	51.69	205.57	1186.62	0.174	0.05	0.05	0.707	A
A5W	1	2	404.62	101.16	404.46	1186.62	0.341	0.18	0.18	1.370	A

Main results: (08:45-09:00)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	409.30	102.33	406.13	596.35	0.686	2.71	1.14	10.569	B
A5E	1	2	381.89	95.47	383.06	596.35	0.640	2.35	0.87	9.512	A
A4244	1	1	553.37	138.34	554.71	816.11	0.678	9.39	1.64	18.122	C
A5W	1	1	168.80	42.20	168.30	1189.44	0.142	0.05	0.03	0.585	A
A5W	1	2	345.13	86.28	345.79	1189.44	0.290	0.18	0.09	1.126	A

Main results: (09:00-09:15)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	340.78	85.19	350.14	611.13	0.558	1.14	0.55	6.583	A
A5E	1	2	313.04	78.26	319.22	611.13	0.512	0.87	0.42	5.676	A
A4244	1	1	456.60	114.15	446.91	864.75	0.528	1.64	0.87	5.709	A
A5W	1	1	129.53	32.38	129.36	1197.49	0.108	0.03	0.02	0.520	A
A5W	1	2	284.12	71.03	284.79	1197.49	0.237	0.09	0.05	0.914	A

Lanes: Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	9.17	0.61	6.264	A	A
A5E	1	2	7.18	0.48	5.518	A	A
A4244	1	1	10.32	0.69	5.436	A	A
A5W	1	1	0.29	0.02	0.523	A	A
A5W	1	2	1.14	0.08	0.943	A	A

Queueing Delay results: (08:00-08:15)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	16.77	1.12	9.693	A	A
A5E	1	2	13.69	0.91	8.567	A	A
A4244	1	1	24.23	1.62	10.710	B	B
A5W	1	1	0.40	0.03	0.587	A	A
A5W	1	2	1.58	0.11	1.119	A	A

Queueing Delay results: (08:15-08:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	38.68	2.58	19.007	C	B
A5E	1	2	34.05	2.27	17.388	C	B
A4244	1	1	92.38	6.16	35.062	E	D
A5W	1	1	0.56	0.04	0.658	A	A
A5W	1	2	2.32	0.15	1.357	A	A

Queueing Delay results: (08:30-08:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	45.04	3.00	21.649	C	C
A5E	1	2	40.45	2.70	20.289	C	C
A4244	1	1	128.65	8.58	47.160	E	D
A5W	1	1	0.61	0.04	0.707	A	A
A5W	1	2	2.36	0.16	1.370	A	A

Queueing Delay results: (08:45-09:00)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	18.89	1.26	10.569	B	B
A5E	1	2	15.81	1.05	9.512	A	A
A4244	1	1	47.98	3.20	18.122	C	B
A5W	1	1	0.40	0.03	0.585	A	A
A5W	1	2	1.60	0.11	1.126	A	A

Queueing Delay results: (09:00-09:15)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	9.89	0.66	6.583	A	A
A5E	1	2	7.67	0.51	5.676	A	A
A4244	1	1	11.19	0.75	5.709	A	A
A5W	1	1	0.29	0.02	0.520	A	A
A5W	1	2	1.11	0.07	0.914	A	A

Lanes: Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.63	0.00	0.00	1.59	2.01
A5E	1	2	0.46	0.00	0.00	1.27	1.76
A4244	1	1	0.66	0.00	0.00	1.93	2.89
A5W	1	1	0.01	0.00	0.00	0.00	0.00
A5W	1	2	0.06	0.00	0.00	0.00	0.06

Queue Variation results: (08:00-08:15)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	1.19	0.00	0.17	2.76	3.53
A5E	1	2	0.90	0.00	0.00	2.09	2.84
A4244	1	1	1.48	0.00	0.00	4.36	6.29
A5W	1	1	0.02	0.00	0.00	0.00	0.00
A5W	1	2	0.09	0.00	0.00	0.00	0.36

Queue Variation results: (08:15-08:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	2.74	0.00	1.32	6.10	8.34
A5E	1	2	2.40	0.00	1.09	5.76	7.01
A4244	1	1	8.22	0.00	4.76	20.05	27.05
A5W	1	1	0.05	0.00	0.00	0.00	0.00
A5W	1	2	0.18	0.00	0.00	0.28	0.90

Queue Variation results: (08:30-08:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	2.71	0.00	1.36	6.21	7.84
A5E	1	2	2.35	0.00	1.10	5.63	6.93
A4244	1	1	9.39	0.00	5.50	24.03	29.53
A5W	1	1	0.05	0.00	0.00	0.00	0.00
A5W	1	2	0.18	0.00	0.00	0.31	0.93

Queue Variation results: (08:45-09:00)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	1.14	0.00	0.27	2.88	3.47
A5E	1	2	0.87	0.00	0.00	2.01	3.26
A4244	1	1	1.64	0.00	0.25	4.21	6.21
A5W	1	1	0.03	0.00	0.00	0.00	0.00
A5W	1	2	0.09	0.00	0.00	0.00	0.41

Queue Variation results: (09:00-09:15)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.55	0.00	0.00	1.49	1.87
A5E	1	2	0.42	0.00	0.00	1.00	1.82
A4244	1	1	0.87	0.00	0.00	2.56	3.84
A5W	1	1	0.02	0.00	0.00	0.00	0.00
A5W	1	2	0.05	0.00	0.00	0.00	0.00

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A5 - A4244 ENTRY LANE.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A5 - A4244 rbt\2018 DF
Report generation date: 14/06/2018 17:52:11

« (Default Analysis Set) - 2017, PM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Direct/Resultant Flows
» Turning Proportions
» Vehicle Mix
» Results
» Lane Results

Summary of junction performance

	PM				
	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS
	A1 [Entry Lane Simulation] - 2017				
Arm A5E	0.96	2.97	6.75	N/A	A
Arm A4244	0.47	1.98	3.85	N/A	A
Arm A5W	1.02	3.65	2.51	N/A	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017, AM" model duration: 07:45 - 09:15
"D2 - 2017, PM " model duration: 16:15 - 17:45
"D3 - 2023 BASE, AM" model duration: 07:45 - 09:15
"D4 - 2023 BASE, PM" model duration: 16:15 - 17:45
"D5 - 2023 BASE + DEV, AM" model duration: 07:45 - 09:15
"D6 - 2023 BASE + DEV, PM" model duration: 16:15 - 17:45
"D8 - 2023 BASE + DEV + Seasonality, PM" model duration: 16:15 - 17:45
"D9 - Secondary 2023 BASE + DEV, AM" model duration: 07:45 - 09:15
"D11 - Secondary 2023 BASE + DEV + Seasonality, PM" model duration: 16:15 - 17:45
"D13 - 2023 BASE Seasonality, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 17:52:09

File summary

Title	(untitled)
Location	
Site Number	
Date	28/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	RogersA2
Description	

Analysis Options

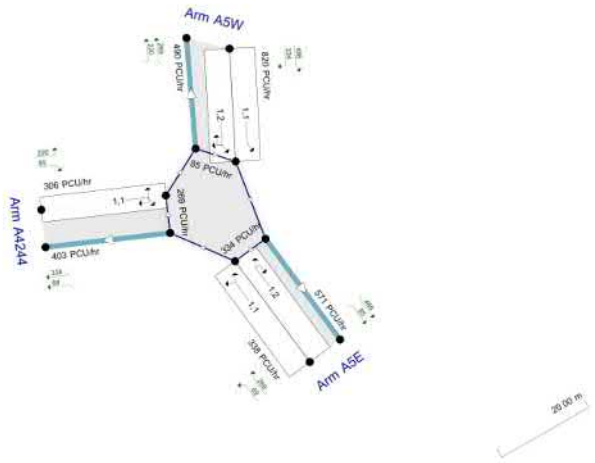
Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Entry Lane Analysis Options

Stop Criteria (%)	Random Seed	Results Refresh Speed (s)	Individual Vehicle Animation Number Of Trials	Time Step Size (s)	Last Run Random Seed	Last Run Number Of Trials
5.00	-1	3	1	10	27513134	162



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	Entry Lane Simulation		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2017, PM	2017	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	A5 LLYS Y GWYNT	Roundabout	A5E,A4244,A5W			3.75	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
A5E	A5E	(untitled)	
A4244	A4244	(untitled)	
A5W	A5W	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
A5E	0.00	99999.00
A4244	0.00	99999.00
A5W	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A5E	3.75	3.75	0.00	35.00	35.00	39.00	
A4244	3.75	5.30	5.50	25.00	35.00	25.00	
A5W	7.45	8.50	4.10	28.00	35.00	33.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A5E		(calculated)	(calculated)	0.532	1124.577
A4244		(calculated)	(calculated)	0.603	1420.724
A5W		(calculated)	(calculated)	0.803	2440.867

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
A5E	Percentage			120.00
A4244	Percentage			80.00
A5W	None			

Entry Lane Analysis: Arm options

Arm	Lane Capacity Source	Traffic Considering Secondary Lanes (%)
A5E	Evenly split	10.00
A4244	Evenly split	10.00
A5W	Evenly split	10.00

Lanes

Arm	Lane Level	Lane	Has Limited Storage	Storage (PCU)	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
A5E	**1**	1		Infinity	0.00	99999.00
A5E	**1**	2		Infinity	0.00	99999.00
A4244	**1**	1		Infinity	0.00	99999.00
A5W	**1**	1		Infinity	0.00	99999.00
A5W	**1**	2		Infinity	0.00	99999.00

Entry Lane slope and intercept

Arm	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A5E	(calculated)	(calculated)	0.266	562.289
A5E	(calculated)	(calculated)	0.266	562.289
A4244	(calculated)	(calculated)	0.603	1420.724
A5W	(calculated)	(calculated)	0.401	1220.433
A5W	(calculated)	(calculated)	0.401	1220.433

Lane Movements

Junction	Arm	Lane Level	Lane	Arm		
				A5E	A4244	A5W
1	**A5E**	**1**	**1**		✓	✓
1	**A5E**	**1**	**2**	✓		✓
1	**A4244**	**1**	**1**	✓	✓	✓
1	**A5W**	**1**	**1**	✓		
1	**A5W**	**1**	**2**	✓	✓	✓

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A5E	ONE HOUR	✓	440.00	100.000
A4244	ONE HOUR	✓	405.00	100.000
A5W	ONE HOUR	✓	1074.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	**A5E**	331.26	331.26		
16:15-16:30	**A4244**	304.91	304.91		
16:15-16:30	**A5W**	808.56	808.56		
16:30-16:45	**A5E**	395.55	395.55		
16:30-16:45	**A4244**	364.09	364.09		
16:30-16:45	**A5W**	965.50	965.50		
16:45-17:00	**A5E**	484.45	484.45		
16:45-17:00	**A4244**	445.91	445.91		
16:45-17:00	**A5W**	1182.50	1182.50		
17:00-17:15	**A5E**	484.45	484.45		
17:00-17:15	**A4244**	445.91	445.91		
17:00-17:15	**A5W**	1182.50	1182.50		
17:15-17:30	**A5E**	395.55	395.55		
17:15-17:30	**A4244**	364.09	364.09		
17:15-17:30	**A5W**	965.50	965.50		
17:30-17:45	**A5E**	331.26	331.26		
17:30-17:45	**A4244**	304.91	304.91		
17:30-17:45	**A5W**	808.56	808.56		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	**A5E**	0.000	97.000	343.000
	A4244	112.000	0.000	293.000
	A5W	628.000	446.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	**A5E**	0.00	0.22	0.78
	A4244	0.28	0.00	0.72
	A5W	0.58	0.42	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	1.000	1.000	1.000
	A4244	1.000	1.000	1.000
	A5W	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	0.0	0.0	0.0
	A4244	0.0	0.0	0.0
	A5W	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)
A5E	6.75	0.96	2.97	A	402.16	603.24	54.76	5.45	0.61
A4244	3.85	0.47	1.98	A	366.36	549.54	27.73	3.03	0.31
A5W	2.51	1.02	3.65	A	1005.93	1508.89	48.91	1.94	0.54

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	339.26	84.81	337.78	570.74	334.07	0.00	0.40	4.005	A
A4244	304.81	76.20	305.56	402.59	269.26	0.00	0.17	2.060	A
A5W	825.19	206.30	819.63	489.63	85.19	0.00	0.40	1.385	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	372.22	93.06	377.41	682.59	406.30	0.00	0.54	4.995	A
A4244	357.04	89.26	353.70	495.19	288.52	0.00	0.26	2.810	A
A5W	995.56	248.89	989.63	542.96	99.26	0.00	0.58	1.866	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	479.63	119.91	484.81	814.81	509.26	0.54	0.88	6.754	A
A4244	442.59	110.65	450.37	610.74	383.33	0.26	0.32	3.664	A
A5W	1212.96	303.24	1198.89	708.52	125.19	0.58	1.02	2.510	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	484.81	121.20	479.63	821.48	502.96	0.88	0.96	6.701	A
A4244	446.30	111.57	442.22	598.52	384.07	0.32	0.47	3.846	A
A5W	1190.74	297.69	1198.15	700.00	126.30	1.02	0.70	2.472	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	398.89	99.72	394.81	642.59	401.48	0.96	0.55	4.958	A
A4244	350.00	87.50	345.56	490.00	306.30	0.47	0.32	2.778	A
A5W	952.22	238.06	953.70	561.48	90.37	0.70	0.49	1.849	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	338.15	84.54	344.44	567.04	375.19	0.55	0.35	3.878	A
A4244	297.41	74.35	293.70	454.81	264.81	0.32	0.20	2.114	A
A5W	858.89	214.72	865.93	482.22	76.30	0.49	0.20	1.377	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	5.55	0.37	4.005	A	A
A4244	2.64	0.18	2.060	A	A
A5W	4.62	0.31	1.385	A	A

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	8.15	0.54	4.995	A	A
A4244	4.25	0.28	2.810	A	A
A5W	7.51	0.50	1.866	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	13.76	0.92	6.754	A	A
A4244	6.78	0.45	3.664	A	A
A5W	12.34	0.82	2.510	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	13.58	0.91	6.701	A	A
A4244	7.16	0.48	3.846	A	A
A5W	12.28	0.82	2.472	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	8.24	0.55	4.958	A	A
A4244	4.19	0.28	2.778	A	A
A5W	7.47	0.50	1.849	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	5.48	0.37	3.878	A	A
A4244	2.71	0.18	2.114	A	A
A5W	4.69	0.31	1.377	A	A

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	0.40	0.00	0.00	0.90	1.54
A4244	0.17	0.00	0.00	0.08	0.89
A5W	0.40	0.00	0.00	0.95	2.11

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	0.54	0.00	0.00	1.45	1.98
A4244	0.26	0.00	0.00	0.60	1.58
A5W	0.58	0.00	0.00	1.77	2.61

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	0.88	0.00	0.00	1.98	2.97
A4244	0.32	0.00	0.00	0.85	1.54
A5W	1.02	0.00	0.00	2.72	3.65

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	0.96	0.00	0.00	2.16	2.90
A4244	0.47	0.00	0.00	1.49	1.98
A5W	0.70	0.00	0.00	1.84	3.18

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	0.55	0.00	0.00	1.39	1.93
A4244	0.32	0.00	0.00	0.88	1.66
A5W	0.49	0.00	0.00	1.28	2.15

Queue Variation results: (17:30-17:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	0.35	0.00	0.00	0.77	1.63
A4244	0.20	0.00	0.00	0.46	0.94
A5W	0.20	0.00	0.00	0.52	0.94

Lane Results

Lanes: Main Results for each time segment

Main results: (16:15-16:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	186.30	46.57	188.89	568.15	0.328	0.00	0.20	4.321	A
A5E	1	2	152.96	38.24	148.89	568.15	0.269	0.00	0.20	3.588	A
A4244	1	1	304.81	76.20	305.56	1006.63	0.303	0.00	0.17	2.060	A
A5W	1	1	316.30	79.07	313.33	1186.24	0.267	0.00	0.11	1.006	A
A5W	1	2	508.89	127.22	506.30	1186.24	0.429	0.00	0.29	1.613	A

Main results: (16:30-16:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	217.41	54.35	215.56	545.11	0.399	0.20	0.39	5.386	A
A5E	1	2	154.81	38.70	161.85	545.11	0.284	0.20	0.15	4.492	A
A4244	1	1	357.04	89.26	353.70	997.33	0.358	0.17	0.26	2.810	A
A5W	1	1	388.89	97.22	387.41	1180.59	0.329	0.11	0.17	1.152	A
A5W	1	2	606.67	151.67	602.22	1180.59	0.514	0.29	0.41	2.317	A

Main results: (16:45-17:00)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	267.04	66.76	272.22	512.25	0.521	0.39	0.50	7.159	A
A5E	1	2	212.59	53.15	212.59	512.25	0.415	0.15	0.38	6.243	A
A4244	1	1	442.59	110.65	450.37	951.57	0.465	0.26	0.32	3.664	A
A5W	1	1	484.07	121.02	478.89	1170.18	0.414	0.17	0.27	1.695	A
A5W	1	2	728.89	182.22	720.00	1170.18	0.623	0.41	0.75	3.061	A

Main results: (17:00-17:15)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	261.85	65.46	262.96	514.26	0.509	0.50	0.51	7.224	A
A5E	1	2	222.96	55.74	216.67	514.26	0.434	0.38	0.45	6.052	A
A4244	1	1	446.30	111.57	442.22	951.21	0.469	0.32	0.47	3.846	A
A5W	1	1	472.22	118.06	476.30	1169.74	0.404	0.27	0.19	1.670	A
A5W	1	2	718.52	179.63	721.85	1169.74	0.614	0.75	0.52	3.020	A

Main results: (17:15-17:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	225.93	56.48	222.59	546.64	0.413	0.51	0.34	5.235	A
A5E	1	2	172.96	43.24	172.22	546.64	0.316	0.45	0.21	4.602	A
A4244	1	1	350.00	87.50	345.56	988.75	0.354	0.47	0.32	2.778	A
A5W	1	1	368.15	92.04	367.04	1184.16	0.311	0.19	0.13	1.195	A
A5W	1	2	584.07	146.02	586.67	1184.16	0.493	0.52	0.36	2.266	A

Main results: (17:30-17:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	189.26	47.31	191.11	555.03	0.341	0.34	0.24	4.132	A
A5E	1	2	148.89	37.22	153.33	555.03	0.268	0.21	0.11	3.544	A
A4244	1	1	297.41	74.35	293.70	1008.77	0.295	0.32	0.20	2.114	A
A5W	1	1	328.89	82.22	329.26	1189.81	0.276	0.13	0.05	0.893	A
A5W	1	2	530.00	132.50	536.67	1189.81	0.445	0.36	0.15	1.667	A

Lanes: Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	3.41	0.23	4.321	A	A
A5E	1	2	2.14	0.14	3.588	A	A
A4244	1	1	2.64	0.18	2.060	A	A
A5W	1	1	1.26	0.08	1.006	A	A
A5W	1	2	3.35	0.22	1.613	A	A

Queueing Delay results: (16:30-16:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	4.94	0.33	5.386	A	A
A5E	1	2	3.21	0.21	4.492	A	A
A4244	1	1	4.25	0.28	2.810	A	A
A5W	1	1	1.79	0.12	1.152	A	A
A5W	1	2	5.72	0.38	2.317	A	A

Queueing Delay results: (16:45-17:00)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	8.16	0.54	7.159	A	A
A5E	1	2	5.60	0.37	6.243	A	A
A4244	1	1	6.78	0.45	3.664	A	A
A5W	1	1	3.37	0.22	1.695	A	A
A5W	1	2	8.98	0.60	3.061	A	A

Queueing Delay results: (17:00-17:15)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	8.11	0.54	7.224	A	A
A5E	1	2	5.47	0.36	6.052	A	A
A4244	1	1	7.16	0.48	3.846	A	A
A5W	1	1	3.37	0.22	1.670	A	A
A5W	1	2	8.92	0.59	3.020	A	A

Queueing Delay results: (17:15-17:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	4.88	0.33	5.235	A	A
A5E	1	2	3.36	0.22	4.602	A	A
A4244	1	1	4.19	0.28	2.778	A	A
A5W	1	1	1.87	0.12	1.195	A	A
A5W	1	2	5.60	0.37	2.266	A	A

Queueing Delay results: (17:30-17:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	3.32	0.22	4.132	A	A
A5E	1	2	2.15	0.14	3.544	A	A
A4244	1	1	2.71	0.18	2.114	A	A
A5W	1	1	1.14	0.08	0.893	A	A
A5W	1	2	3.55	0.24	1.667	A	A

Lanes: Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.20	0.00	0.00	0.51	0.87
A5E	1	2	0.20	0.00	0.00	0.43	0.93
A4244	1	1	0.17	0.00	0.00	0.08	0.89
A5W	1	1	0.11	0.00	0.00	0.00	0.59
A5W	1	2	0.29	0.00	0.00	0.74	1.41

Queue Variation results: (16:30-16:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.39	0.00	0.00	1.13	1.71
A5E	1	2	0.15	0.00	0.00	0.32	0.71
A4244	1	1	0.26	0.00	0.00	0.60	1.58
A5W	1	1	0.17	0.00	0.00	0.15	0.83
A5W	1	2	0.41	0.00	0.00	1.38	2.21

Queue Variation results: (16:45-17:00)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.50	0.00	0.00	1.30	1.81
A5E	1	2	0.38	0.00	0.00	0.92	1.59
A4244	1	1	0.32	0.00	0.00	0.85	1.54
A5W	1	1	0.27	0.00	0.00	0.64	1.23
A5W	1	2	0.75	0.00	0.00	2.22	2.84

Queue Variation results: (17:00-17:15)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.51	0.00	0.00	1.49	1.94
A5E	1	2	0.45	0.00	0.00	1.05	1.59
A4244	1	1	0.47	0.00	0.00	1.49	1.98
A5W	1	1	0.19	0.00	0.00	0.28	1.13
A5W	1	2	0.52	0.00	0.00	1.38	2.96

Queue Variation results: (17:15-17:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.34	0.00	0.00	0.84	1.43
A5E	1	2	0.21	0.00	0.00	0.49	0.86
A4244	1	1	0.32	0.00	0.00	0.86	1.66
A5W	1	1	0.13	0.00	0.00	0.00	0.70
A5W	1	2	0.36	0.00	0.00	0.89	1.74

Queue Variation results: (17:30-17:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.24	0.00	0.00	0.62	0.95
A5E	1	2	0.11	0.00	0.00	0.00	0.49
A4244	1	1	0.20	0.00	0.00	0.46	0.94
A5W	1	1	0.05	0.00	0.00	0.00	1.00
A5W	1	2	0.15	0.00	0.00	0.22	0.84

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A5 - A4244 ENTRY LANE.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A5 - A4244 rbt\2018 DF
Report generation date: 14/06/2018 18:00:36

« (Default Analysis Set) - 2023 BASE, AM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Direct/Resultant Flows
» Turning Proportions
» Vehicle Mix
» Results
» Lane Results

Summary of junction performance

	AM				
	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS
	A1 [Entry Lane Simulation] - 2023 BASE				
Arm A5E	10.78	32.70	38.12	N/A	E
Arm A4244	22.31	58.10	100.29	N/A	F
Arm A5W	0.24	1.24	1.22	N/A	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017, AM" model duration: 07:45 - 09:15
"D2 - 2017, PM" model duration: 16:15 - 17:45
"D3 - 2023 BASE, AM " model duration: 07:45 - 09:15
"D4 - 2023 BASE, PM" model duration: 16:15 - 17:45
"D5 - 2023 BASE + DEV, AM" model duration: 07:45 - 09:15
"D6 - 2023 BASE + DEV, PM" model duration: 16:15 - 17:45
"D8 - 2023 BASE + DEV + Seasonality, PM" model duration: 16:15 - 17:45
"D9 - Secondary 2023 BASE + DEV, AM" model duration: 07:45 - 09:15
"D11 - Secondary 2023 BASE + DEV + Seasonality, PM" model duration: 16:15 - 17:45
"D13 - 2023 BASE Seasonality, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 18:00:34

File summary

Title	(untitled)
Location	
Site Number	
Date	28/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	RogersA2
Description	

Analysis Options

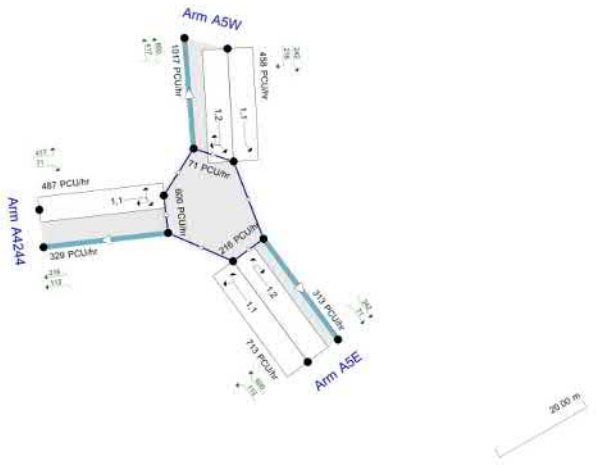
Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Entry Lane Analysis Options

Stop Criteria (%)	Random Seed	Results Refresh Speed (s)	Individual Vehicle Animation Number Of Trials	Time Step Size (s)	Last Run Random Seed	Last Run Number Of Trials
5.00	-1	3	1	10	541150840	318



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2023 BASE, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	Entry Lane Simulation		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 BASE, AM	2023 BASE	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	A5 LLYS Y GWYNT	Roundabout	A5E,A4244,A5W			46.42	E

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
A5E	A5E	(untitled)	
A4244	A4244	(untitled)	
A5W	A5W	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
A5E	0.00	99999.00
A4244	0.00	99999.00
A5W	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A5E	3.75	3.75	0.00	35.00	35.00	39.00	
A4244	3.75	5.30	5.50	25.00	35.00	25.00	
A5W	7.45	8.50	4.10	28.00	35.00	33.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A5E		(calculated)	(calculated)	0.532	1124.577
A4244		(calculated)	(calculated)	0.603	1420.724
A5W		(calculated)	(calculated)	0.803	2440.867

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
A5E	Percentage			120.00
A4244	Percentage			80.00
A5W	None			

Entry Lane Analysis: Arm options

Arm	Lane Capacity Source	Traffic Considering Secondary Lanes (%)
A5E	Evenly split	10.00
A4244	Evenly split	10.00
A5W	Evenly split	10.00

Lanes

Arm	Lane Level	Lane	Has Limited Storage	Storage (PCU)	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
A5E	1	1		Infinity	0.00	99999.00
A5E	1	2		Infinity	0.00	99999.00
A4244	1	1		Infinity	0.00	99999.00
A5W	1	1		Infinity	0.00	99999.00
A5W	1	2		Infinity	0.00	99999.00

Entry Lane slope and intercept

Arm	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A5E	(calculated)	(calculated)	0.266	562.289
A5E	(calculated)	(calculated)	0.266	562.289
A4244	(calculated)	(calculated)	0.603	1420.724
A5W	(calculated)	(calculated)	0.401	1220.433
A5W	(calculated)	(calculated)	0.401	1220.433

Lane Movements

Junction	Arm	Lane Level	Lane	Arm		
				A5E	A4244	A5W
1	A5E	1	1		✓	✓
1	A5E	1	2	✓		✓
1	A4244	1	1	✓	✓	✓
1	A5W	1	1	✓		
1	A5W	1	2	✓	✓	✓

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A5E	ONE HOUR	✓	952.00	100.000
A4244	ONE HOUR	✓	648.00	100.000
A5W	ONE HOUR	✓	598.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A5E	716.72	716.72		
07:45-08:00	A4244	487.85	487.85		
07:45-08:00	A5W	450.21	450.21		
08:00-08:15	A5E	855.83	855.83		
08:00-08:15	A4244	582.54	582.54		
08:00-08:15	A5W	537.59	537.59		
08:15-08:30	A5E	1048.17	1048.17		
08:15-08:30	A4244	713.46	713.46		
08:15-08:30	A5W	658.41	658.41		
08:30-08:45	A5E	1048.17	1048.17		
08:30-08:45	A4244	713.46	713.46		
08:30-08:45	A5W	658.41	658.41		
08:45-09:00	A5E	855.83	855.83		
08:45-09:00	A4244	582.54	582.54		
08:45-09:00	A5W	537.59	537.59		
09:00-09:15	A5E	716.72	716.72		
09:00-09:15	A4244	487.85	487.85		
09:00-09:15	A5W	450.21	450.21		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	0.000	148.000	804.000
	A4244	88.000	0.000	560.000
	A5W	310.000	288.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	0.00	0.16	0.84
	A4244	0.14	0.00	0.86
	A5W	0.52	0.48	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	1.000	1.000	1.000
	A4244	1.000	1.000	1.000
	A5W	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	0.0	0.0	0.0
	A4244	0.0	0.0	0.0
	A5W	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)
A5E	38.12	10.78	32.70	E	881.57	1322.36	430.82	19.55	4.79
A4244	100.29	22.31	58.10	F	599.09	898.63	668.40	44.63	7.43
A5W	1.22	0.24	1.24	A	552.26	828.40	14.36	1.04	0.16

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	712.83	178.21	713.02	313.02	215.85	0.00	1.35	6.898	A
A4244	484.15	121.04	487.36	328.87	600.00	0.00	0.92	6.875	A
A5W	459.06	114.76	458.30	1016.79	70.57	0.00	0.09	0.845	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	862.45	215.61	866.60	371.70	267.74	0.00	2.49	11.296	B
A4244	597.36	149.34	594.15	421.13	713.21	0.00	2.80	14.816	B
A5W	556.23	139.06	555.28	1223.21	84.15	0.00	0.15	0.979	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1072.45	268.11	1025.09	433.40	311.70	2.49	10.43	28.299	D
A4244	734.91	183.73	687.92	471.32	865.47	2.80	15.07	54.392	F
A5W	651.51	162.88	656.79	1465.09	88.30	0.15	0.18	1.209	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1032.45	258.11	1050.75	441.51	317.74	10.43	10.78	38.118	E
A4244	722.45	180.61	682.64	486.98	881.51	15.07	22.31	100.289	F
A5W	667.17	166.79	665.47	1470.38	93.77	0.18	0.23	1.223	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	866.42	216.60	871.89	350.38	266.79	10.78	2.82	16.168	C
A4244	594.15	148.54	613.40	401.32	737.36	22.31	4.91	57.022	F
A5W	544.34	136.08	537.55	1271.13	79.62	0.23	0.24	1.032	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	742.83	185.71	735.85	295.28	207.55	2.82	1.56	7.116	A
A4244	461.51	115.38	474.72	316.42	626.98	4.91	0.81	9.872	A
A5W	435.28	108.82	438.11	1036.98	64.72	0.24	0.07	0.838	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	20.51	1.37	6.898	A	A
A4244	13.81	0.92	6.875	A	A
A5W	1.58	0.11	0.845	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	40.30	2.69	11.296	B	B
A4244	35.74	2.38	14.816	B	B
A5W	2.20	0.15	0.979	A	A

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	119.03	7.94	28.299	D	C
A4244	146.57	9.77	54.392	F	D
A5W	3.32	0.22	1.209	A	A

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	165.58	11.04	38.118	E	D
A4244	281.56	18.77	100.289	F	F
A5W	3.37	0.22	1.223	A	A

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	63.44	4.23	16.168	C	B
A4244	167.27	11.15	57.022	F	E
A5W	2.30	0.15	1.032	A	A

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	21.96	1.46	7.116	A	A
A4244	23.45	1.56	9.872	A	A
A5W	1.58	0.11	0.838	A	A

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1.35	0.00	0.18	3.35	4.74
A4244	0.92	0.00	0.00	2.56	3.79
A5W	0.09	0.00	0.00	0.00	0.34

Queue Variation results: (08:00-08:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	2.49	0.00	1.25	6.13	8.02
A4244	2.80	0.00	1.06	7.03	9.02
A5W	0.15	0.00	0.00	0.05	0.68

Queue Variation results: (08:15-08:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	10.43	0.00	7.83	21.92	29.10
A4244	15.07	0.00	11.36	32.84	41.55
A5W	0.18	0.00	0.00	0.27	0.96

Queue Variation results: (08:30-08:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	10.78	0.00	6.59	26.60	32.70
A4244	22.31	0.00	17.90	47.07	58.10
A5W	0.23	0.00	0.00	0.53	0.98

Queue Variation results: (08:45-09:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	2.82	0.00	1.36	6.32	8.03
A4244	4.91	0.00	1.45	11.64	21.05
A5W	0.24	0.00	0.00	0.59	1.24

Queue Variation results: (09:00-09:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1.56	0.00	0.35	3.51	5.35
A4244	0.81	0.00	0.00	2.22	3.16
A5W	0.07	0.00	0.00	0.00	0.24

Lane Results

Lanes: Main Results for each time segment

Main results: (07:45-08:00)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	375.85	93.96	373.77	605.87	0.620	0.00	0.80	7.340	A
A5E	1	2	336.98	84.25	339.25	605.87	0.556	0.00	0.54	6.407	A
A4244	1	1	484.15	121.04	487.36	847.00	0.572	0.00	0.92	6.875	A
A5W	1	1	150.00	37.50	150.19	1192.11	0.126	0.00	0.02	0.525	A
A5W	1	2	309.06	77.26	308.11	1192.11	0.259	0.00	0.07	0.993	A

Main results: (08:00-08:15)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	452.45	113.11	457.55	589.32	0.768	0.80	1.34	11.803	B
A5E	1	2	410.00	102.50	409.06	589.32	0.696	0.54	1.15	10.753	B
A4244	1	1	597.36	149.34	594.15	792.36	0.754	0.92	2.80	14.816	B
A5W	1	1	179.62	44.91	180.38	1186.66	0.151	0.02	0.03	0.612	A
A5W	1	2	376.60	94.15	374.91	1186.66	0.317	0.07	0.12	1.158	A

Main results: (08:15-08:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	541.89	135.47	522.83	575.29	0.942	1.34	5.38	28.868	D
A5E	1	2	530.57	132.64	502.26	575.29	0.922	1.15	5.05	27.707	D
A4244	1	1	734.91	183.73	687.92	718.87	1.022	2.80	15.07	54.392	F
A5W	1	1	224.72	56.18	224.72	1184.99	0.190	0.03	0.04	0.721	A
A5W	1	2	426.79	106.70	432.08	1184.99	0.360	0.12	0.14	1.460	A

Main results: (08:30-08:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	528.11	132.03	531.13	573.36	0.921	5.38	5.57	39.016	E
A5E	1	2	504.34	126.08	519.62	573.36	0.880	5.05	5.20	37.201	E
A4244	1	1	722.45	180.61	682.64	711.13	1.016	15.07	22.31	100.289	F
A5W	1	1	223.02	55.75	224.53	1182.79	0.189	0.04	0.03	0.758	A
A5W	1	2	444.15	111.04	440.94	1182.79	0.376	0.14	0.20	1.458	A

Main results: (08:45-09:00)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	451.70	112.92	455.85	589.62	0.766	5.57	1.51	16.809	C
A5E	1	2	414.72	103.68	416.04	589.62	0.703	5.20	1.31	15.487	C
A4244	1	1	594.15	148.54	613.40	780.71	0.761	22.31	4.91	57.022	F
A5W	1	1	170.19	42.55	170.00	1188.47	0.143	0.03	0.03	0.647	A
A5W	1	2	374.15	93.54	367.55	1188.47	0.315	0.20	0.21	1.220	A

Main results: (09:00-09:15)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	385.85	96.46	386.98	608.52	0.634	1.51	0.83	7.492	A
A5E	1	2	356.98	89.25	348.87	608.52	0.587	1.31	0.73	6.699	A
A4244	1	1	461.51	115.38	474.72	833.98	0.553	4.91	0.81	9.872	A
A5W	1	1	140.57	35.14	140.00	1194.46	0.118	0.03	0.03	0.493	A
A5W	1	2	294.72	73.68	298.11	1194.46	0.247	0.21	0.05	0.999	A

Lanes: Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	11.48	0.77	7.340	A	A
A5E	1	2	9.03	0.60	6.407	A	A
A4244	1	1	13.81	0.92	6.875	A	A
A5W	1	1	0.31	0.02	0.525	A	A
A5W	1	2	1.27	0.08	0.993	A	A

Queueing Delay results: (08:00-08:15)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	21.80	1.45	11.803	B	B
A5E	1	2	18.50	1.23	10.753	B	B
A4244	1	1	35.74	2.38	14.816	B	B
A5W	1	1	0.45	0.03	0.612	A	A
A5W	1	2	1.75	0.12	1.158	A	A

Queueing Delay results: (08:15-08:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	61.92	4.13	28.868	D	C
A5E	1	2	57.11	3.81	27.707	D	C
A4244	1	1	146.57	9.77	54.392	F	D
A5W	1	1	0.67	0.04	0.721	A	A
A5W	1	2	2.65	0.18	1.460	A	A

Queueing Delay results: (08:30-08:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	85.69	5.71	39.016	E	D
A5E	1	2	79.89	5.33	37.201	E	D
A4244	1	1	281.56	18.77	100.289	F	F
A5W	1	1	0.70	0.05	0.758	A	A
A5W	1	2	2.67	0.18	1.458	A	A

Queueing Delay results: (08:45-09:00)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	33.76	2.25	16.809	C	B
A5E	1	2	29.67	1.98	15.487	C	B
A4244	1	1	167.27	11.15	57.022	F	E
A5W	1	1	0.47	0.03	0.647	A	A
A5W	1	2	1.83	0.12	1.220	A	A

Queueing Delay results: (09:00-09:15)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	12.13	0.81	7.492	A	A
A5E	1	2	9.84	0.66	6.699	A	A
A4244	1	1	23.45	1.56	9.872	A	A
A5W	1	1	0.30	0.02	0.493	A	A
A5W	1	2	1.28	0.09	0.999	A	A

Lanes: Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.80	0.00	0.00	1.96	2.94
A5E	1	2	0.54	0.00	0.00	1.49	2.24
A4244	1	1	0.92	0.00	0.00	2.56	3.79
A5W	1	1	0.02	0.00	0.00	0.00	0.00
A5W	1	2	0.07	0.00	0.00	0.00	0.01

Queue Variation results: (08:00-08:15)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	1.34	0.00	0.39	3.07	4.01
A5E	1	2	1.15	0.00	0.00	2.88	4.10
A4244	1	1	2.80	0.00	1.06	7.03	9.02
A5W	1	1	0.03	0.00	0.00	0.00	0.00
A5W	1	2	0.12	0.00	0.00	0.00	0.53

Queue Variation results: (08:15-08:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	5.38	0.00	3.71	11.43	14.70
A5E	1	2	5.05	0.00	3.42	11.03	14.02
A4244	1	1	15.07	0.00	11.36	32.84	41.55
A5W	1	1	0.04	0.00	0.00	0.00	0.00
A5W	1	2	0.14	0.00	0.00	0.00	0.77

Queue Variation results: (08:30-08:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	5.57	0.00	3.52	12.87	16.37
A5E	1	2	5.20	0.00	3.08	12.80	16.70
A4244	1	1	22.31	0.00	17.90	47.07	58.10
A5W	1	1	0.03	0.00	0.00	0.00	0.00
A5W	1	2	0.20	0.00	0.00	0.43	0.94

Queue Variation results: (08:45-09:00)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	1.51	0.00	0.51	3.29	4.62
A5E	1	2	1.31	0.00	0.27	2.97	4.34
A4244	1	1	4.91	0.00	1.45	11.64	21.05
A5W	1	1	0.03	0.00	0.00	0.00	0.00
A5W	1	2	0.21	0.00	0.00	0.45	1.16

Queue Variation results: (09:00-09:15)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.83	0.00	0.00	1.93	2.87
A5E	1	2	0.73	0.00	0.00	1.81	2.92
A4244	1	1	0.81	0.00	0.00	2.22	3.16
A5W	1	1	0.03	0.00	0.00	0.00	0.00
A5W	1	2	0.05	0.00	0.00	0.00	0.00

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Report generation date: 14/06/2018 18:17:53

« (Default Analysis Set) - 2023 BASE, PM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Direct/Resultant Flows
» Turning Proportions
» Vehicle Mix
» Results
» Lane Results

Summary of junction performance

	PM				
	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS
	A1 [Entry Lane Simulation] - 2023 BASE				
Arm A5E	1.15	3.77	7.74	N/A	A
Arm A4244	0.61	2.39	4.72	N/A	A
Arm A5W	0.98	4.35	2.91	N/A	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017, AM" model duration: 07:45 - 09:15
"D2 - 2017, PM" model duration: 16:15 - 17:45
"D3 - 2023 BASE, AM" model duration: 07:45 - 09:15
"D4 - 2023 BASE, PM " model duration: 16:15 - 17:45
"D5 - 2023 BASE + DEV, AM" model duration: 07:45 - 09:15
"D6 - 2023 BASE + DEV, PM" model duration: 16:15 - 17:45
"D8 - 2023 BASE + DEV + Seasonality, PM" model duration: 16:15 - 17:45
"D13 - 2023 BASE Seasonality, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 18:17:51

File summary

Title	(untitled)
Location	
Site Number	
Date	28/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	RogersA2
Description	

Analysis Options

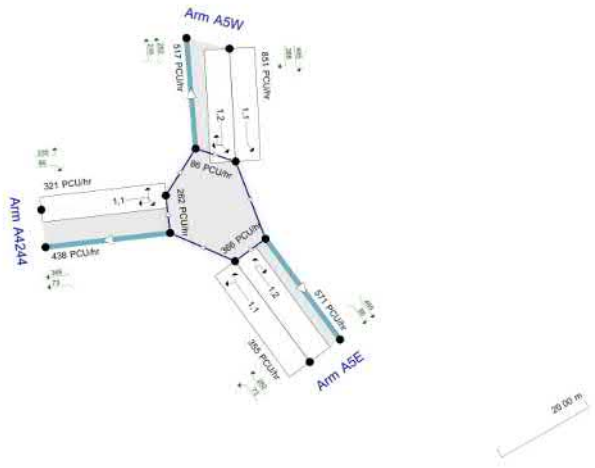
Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Entry Lane Analysis Options

Stop Criteria (%)	Random Seed	Results Refresh Speed (s)	Individual Vehicle Animation Number Of Trials	Time Step Size (s)	Last Run Random Seed	Last Run Number Of Trials
5.00	-1	3	1	10	100117605	186



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2023 BASE, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	Entry Lane Simulation		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 BASE, PM	2023 BASE	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	A5 LLYS Y GWYNT	Roundabout	A5E,A4244,A5W			4.40	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
A5E	A5E	(untitled)	
A4244	A4244	(untitled)	
A5W	A5W	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
A5E	0.00	99999.00
A4244	0.00	99999.00
A5W	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A5E	3.75	3.75	0.00	35.00	35.00	39.00	
A4244	3.75	5.30	5.50	25.00	35.00	25.00	
A5W	7.45	8.50	4.10	28.00	35.00	33.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A5E		(calculated)	(calculated)	0.532	1124.577
A4244		(calculated)	(calculated)	0.603	1420.724
A5W		(calculated)	(calculated)	0.803	2440.867

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
A5E	Percentage			120.00
A4244	Percentage			80.00
A5W	None			

Entry Lane Analysis: Arm options

Arm	Lane Capacity Source	Traffic Considering Secondary Lanes (%)
A5E	Evenly split	10.00
A4244	Evenly split	10.00
A5W	Evenly split	10.00

Lanes

Arm	Lane Level	Lane	Has Limited Storage	Storage (PCU)	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
A5E	1	1		Infinity	0.00	99999.00
A5E	1	2		Infinity	0.00	99999.00
A4244	1	1		Infinity	0.00	99999.00
A5W	1	1		Infinity	0.00	99999.00
A5W	1	2		Infinity	0.00	99999.00

Entry Lane slope and intercept

Arm	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A5E	(calculated)	(calculated)	0.266	562.289
A5E	(calculated)	(calculated)	0.266	562.289
A4244	(calculated)	(calculated)	0.603	1420.724
A5W	(calculated)	(calculated)	0.401	1220.433
A5W	(calculated)	(calculated)	0.401	1220.433

Lane Movements

Junction	Arm	Lane Level	Lane	Arm		
				A5E	A4244	A5W
1	A5E	1	1		✓	✓
1	A5E	1	2	✓		✓
1	A4244	1	1	✓	✓	✓
1	A5W	1	1	✓		
1	A5W	1	2	✓	✓	✓

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A5E	ONE HOUR	✓	471.00	100.000
A4244	ONE HOUR	✓	433.00	100.000
A5W	ONE HOUR	✓	1138.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	A5E	354.59	354.59		
16:15-16:30	A4244	325.99	325.99		
16:15-16:30	A5W	856.75	856.75		
16:30-16:45	A5E	423.42	423.42		
16:30-16:45	A4244	389.26	389.26		
16:30-16:45	A5W	1023.04	1023.04		
16:45-17:00	A5E	518.58	518.58		
16:45-17:00	A4244	476.74	476.74		
16:45-17:00	A5W	1252.96	1252.96		
17:00-17:15	A5E	518.58	518.58		
17:00-17:15	A4244	476.74	476.74		
17:00-17:15	A5W	1252.96	1252.96		
17:15-17:30	A5E	423.42	423.42		
17:15-17:30	A4244	389.26	389.26		
17:15-17:30	A5W	1023.04	1023.04		
17:30-17:45	A5E	354.59	354.59		
17:30-17:45	A4244	325.99	325.99		
17:30-17:45	A5W	856.75	856.75		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	0.000	104.000	367.000
	A4244	120.000	0.000	313.000
	A5W	671.000	467.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	0.00	0.22	0.78
	A4244	0.28	0.00	0.72
	A5W	0.59	0.41	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	1.000	1.000	1.000
	A4244	1.000	1.000	1.000
	A5W	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	0.0	0.0	0.0
	A4244	0.0	0.0	0.0
	A5W	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)
A5E	7.74	1.15	3.77	A	428.44	642.66	63.58	5.94	0.71
A4244	4.72	0.61	2.39	A	401.72	602.58	34.03	3.39	0.38
A5W	2.91	0.98	4.35	A	1046.77	1570.16	57.62	2.20	0.64

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	350.32	87.58	354.52	571.29	365.81	0.00	0.37	4.127	A
A4244	322.26	80.56	321.29	438.39	281.94	0.00	0.22	2.225	A
A5W	848.71	212.18	851.29	517.42	85.81	0.00	0.32	1.518	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	411.94	102.98	420.97	717.74	419.35	0.00	0.47	5.123	A
A4244	409.35	102.34	410.32	509.68	330.65	0.00	0.31	3.109	A
A5W	1019.68	254.92	1024.84	628.71	112.26	0.00	0.53	2.000	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	507.10	126.77	510.65	850.65	532.26	0.47	1.15	7.736	A
A4244	477.42	119.35	475.81	651.61	391.29	0.31	0.56	4.537	A
A5W	1260.32	315.08	1249.68	733.87	133.23	0.53	0.98	2.765	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	521.61	130.40	513.87	865.48	502.26	1.15	1.07	7.421	A
A4244	477.10	119.27	473.87	620.97	395.16	0.56	0.61	4.720	A
A5W	1247.74	311.94	1242.90	744.19	124.84	0.98	0.98	2.910	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	413.87	103.47	414.52	695.81	435.48	1.07	0.52	5.405	A
A4244	393.87	98.47	399.35	537.10	312.90	0.61	0.28	2.838	A
A5W	1032.90	258.23	1022.26	603.23	109.03	0.98	0.65	1.983	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	365.81	91.45	364.19	604.84	368.39	0.52	0.42	4.078	A
A4244	330.32	82.58	332.90	446.13	286.45	0.28	0.15	2.219	A
A5W	871.29	217.82	872.26	518.39	100.97	0.65	0.34	1.551	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	6.07	0.40	4.127	A	A
A4244	2.99	0.20	2.225	A	A
A5W	5.45	0.36	1.518	A	A

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	8.98	0.60	5.123	A	A
A4244	5.06	0.34	3.109	A	A
A5W	8.45	0.56	2.000	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	16.76	1.12	7.736	A	A
A4244	8.97	0.60	4.537	A	A
A5W	14.44	0.96	2.765	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	15.97	1.06	7.421	A	A
A4244	9.39	0.63	4.720	A	A
A5W	15.18	1.01	2.910	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	9.64	0.64	5.405	A	A
A4244	4.57	0.30	2.838	A	A
A5W	8.43	0.56	1.983	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	6.18	0.41	4.078	A	A
A4244	3.04	0.20	2.219	A	A
A5W	5.68	0.38	1.551	A	A

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	0.37	0.00	0.00	0.88	1.39
A4244	0.22	0.00	0.00	0.44	0.93
A5W	0.32	0.00	0.00	0.89	1.52

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	0.47	0.00	0.00	1.04	1.88
A4244	0.31	0.00	0.00	0.89	1.70
A5W	0.53	0.00	0.00	1.46	2.24

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1.15	0.00	0.18	2.85	3.77
A4244	0.56	0.00	0.00	1.55	2.12
A5W	0.98	0.00	0.00	2.58	3.78

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1.07	0.00	0.19	2.24	3.28
A4244	0.61	0.00	0.00	1.70	2.39
A5W	0.98	0.00	0.00	2.49	4.35

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	0.52	0.00	0.00	1.21	1.79
A4244	0.28	0.00	0.00	0.71	1.39
A5W	0.65	0.00	0.00	1.65	2.68

Queue Variation results: (17:30-17:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	0.42	0.00	0.00	1.03	1.65
A4244	0.15	0.00	0.00	0.00	0.67
A5W	0.34	0.00	0.00	0.84	1.63

Lane Results

Lanes: Main Results for each time segment

Main results: (16:15-16:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	195.81	48.95	199.03	558.02	0.351	0.00	0.23	4.447	A
A5E	1	2	154.52	38.63	155.48	558.02	0.277	0.00	0.13	3.710	A
A4244	1	1	322.26	80.56	321.29	1000.51	0.322	0.00	0.22	2.225	A
A5W	1	1	318.71	79.68	320.00	1185.99	0.269	0.00	0.05	1.023	A
A5W	1	2	530.00	132.50	531.29	1185.99	0.447	0.00	0.27	1.826	A

Main results: (16:30-16:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	234.52	58.63	239.35	540.94	0.434	0.23	0.30	5.489	A
A5E	1	2	177.42	44.35	181.61	540.94	0.328	0.13	0.18	4.659	A
A4244	1	1	409.35	102.34	410.32	977.00	0.419	0.22	0.31	3.109	A
A5W	1	1	403.23	100.81	402.90	1175.37	0.343	0.05	0.12	1.272	A
A5W	1	2	616.45	154.11	621.94	1175.37	0.524	0.27	0.41	2.477	A

Main results: (16:45-17:00)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	278.39	69.60	280.97	504.91	0.551	0.30	0.67	8.352	A
A5E	1	2	228.71	57.18	229.68	504.91	0.453	0.18	0.47	6.991	A
A4244	1	1	477.42	119.35	475.81	947.73	0.504	0.31	0.56	4.537	A
A5W	1	1	514.19	128.55	504.84	1166.96	0.441	0.12	0.30	1.916	A
A5W	1	2	746.13	186.53	744.84	1166.96	0.639	0.41	0.68	3.352	A

Main results: (17:00-17:15)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	290.00	72.50	287.10	514.49	0.564	0.67	0.61	8.075	A
A5E	1	2	231.61	57.90	226.77	514.49	0.450	0.47	0.46	6.636	A
A4244	1	1	477.10	119.27	473.87	945.86	0.504	0.56	0.61	4.720	A
A5W	1	1	524.52	131.13	520.65	1170.32	0.448	0.30	0.28	1.943	A
A5W	1	2	723.23	180.81	722.26	1170.32	0.618	0.68	0.70	3.586	A

Main results: (17:15-17:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	231.29	57.82	233.55	535.79	0.432	0.61	0.28	5.840	A
A5E	1	2	182.58	45.65	180.97	535.79	0.341	0.46	0.24	4.856	A
A4244	1	1	393.87	98.47	399.35	985.56	0.400	0.61	0.28	2.838	A
A5W	1	1	406.45	101.61	402.26	1176.67	0.345	0.28	0.18	1.296	A
A5W	1	2	626.45	156.61	620.00	1176.67	0.532	0.70	0.47	2.426	A

Main results: (17:30-17:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	208.71	52.18	210.32	557.20	0.375	0.28	0.26	4.370	A
A5E	1	2	157.10	39.27	153.87	557.20	0.282	0.24	0.16	3.697	A
A4244	1	1	330.32	82.58	332.90	998.33	0.331	0.28	0.15	2.219	A
A5W	1	1	325.48	81.37	325.48	1179.90	0.276	0.18	0.09	1.006	A
A5W	1	2	545.81	136.45	546.77	1179.90	0.463	0.47	0.26	1.891	A

Lanes: Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	3.70	0.25	4.447	A	A
A5E	1	2	2.36	0.16	3.710	A	A
A4244	1	1	2.99	0.20	2.225	A	A
A5W	1	1	1.41	0.09	1.023	A	A
A5W	1	2	4.04	0.27	1.826	A	A

Queueing Delay results: (16:30-16:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	5.37	0.36	5.489	A	A
A5E	1	2	3.61	0.24	4.659	A	A
A4244	1	1	5.06	0.34	3.109	A	A
A5W	1	1	2.13	0.14	1.272	A	A
A5W	1	2	6.32	0.42	2.477	A	A

Queueing Delay results: (16:45-17:00)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	9.90	0.66	8.352	A	A
A5E	1	2	6.86	0.46	6.991	A	A
A4244	1	1	8.97	0.60	4.537	A	A
A5W	1	1	4.08	0.27	1.916	A	A
A5W	1	2	10.36	0.69	3.352	A	A

Queueing Delay results: (17:00-17:15)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	9.49	0.63	8.075	A	A
A5E	1	2	6.47	0.43	6.636	A	A
A4244	1	1	9.39	0.63	4.720	A	A
A5W	1	1	4.17	0.28	1.943	A	A
A5W	1	2	11.00	0.73	3.586	A	A

Queueing Delay results: (17:15-17:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	5.80	0.39	5.840	A	A
A5E	1	2	3.84	0.26	4.856	A	A
A4244	1	1	4.57	0.30	2.838	A	A
A5W	1	1	2.15	0.14	1.296	A	A
A5W	1	2	6.28	0.42	2.426	A	A

Queueing Delay results: (17:30-17:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	3.75	0.25	4.370	A	A
A5E	1	2	2.43	0.16	3.697	A	A
A4244	1	1	3.04	0.20	2.219	A	A
A5W	1	1	1.42	0.09	1.006	A	A
A5W	1	2	4.26	0.28	1.891	A	A

Lanes: Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.23	0.00	0.00	0.59	0.95
A5E	1	2	0.13	0.00	0.00	0.14	0.69
A4244	1	1	0.22	0.00	0.00	0.44	0.93
A5W	1	1	0.05	0.00	0.00	0.00	0.00
A5W	1	2	0.27	0.00	0.00	0.76	1.31

Queue Variation results: (16:30-16:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.30	0.00	0.00	0.80	1.31
A5E	1	2	0.18	0.00	0.00	0.38	0.80
A4244	1	1	0.31	0.00	0.00	0.89	1.70
A5W	1	1	0.12	0.00	0.00	0.00	0.62
A5W	1	2	0.41	0.00	0.00	1.16	1.78

Queue Variation results: (16:45-17:00)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.67	0.00	0.00	1.73	2.41
A5E	1	2	0.47	0.00	0.00	1.23	1.85
A4244	1	1	0.56	0.00	0.00	1.55	2.12
A5W	1	1	0.30	0.00	0.00	0.96	1.58
A5W	1	2	0.68	0.00	0.00	1.85	2.81

Queue Variation results: (17:00-17:15)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.61	0.00	0.00	1.46	2.14
A5E	1	2	0.46	0.00	0.00	1.26	1.70
A4244	1	1	0.61	0.00	0.00	1.70	2.39
A5W	1	1	0.28	0.00	0.00	0.73	1.59
A5W	1	2	0.70	0.00	0.00	1.76	2.81

Queue Variation results: (17:15-17:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.28	0.00	0.00	0.74	1.19
A5E	1	2	0.24	0.00	0.00	0.61	0.90
A4244	1	1	0.28	0.00	0.00	0.71	1.39
A5W	1	1	0.18	0.00	0.00	0.26	0.96
A5W	1	2	0.47	0.00	0.00	1.34	1.92

Queue Variation results: (17:30-17:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.26	0.00	0.00	0.67	1.09
A5E	1	2	0.16	0.00	0.00	0.35	0.74
A4244	1	1	0.15	0.00	0.00	0.00	0.67
A5W	1	1	0.09	0.00	0.00	0.00	0.36
A5W	1	2	0.26	0.00	0.00	0.59	1.34

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A5 - A4244 ENTRY LANE.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A5 - A4244 rbt\2018 DF
Report generation date: 14/06/2018 18:05:41

« (Default Analysis Set) - 2023 BASE + DEV, AM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Direct/Resultant Flows
» Turning Proportions
» Vehicle Mix
» Results
» Lane Results

Summary of junction performance

There are warnings associated with this model run - see the 'Data Errors and Warnings' tables.

	AM				
	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS
	A1 [Entry Lane Simulation] - 2023 BASE + DEV				
Arm A5E	31.61	73.87	97.22	N/A	F
Arm A4244	90.63	139.95	425.80	N/A	F
Arm A5W	0.45	2.24	1.97	N/A	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017, AM" model duration: 07:45 - 09:15
"D2 - 2017, PM" model duration: 16:15 - 17:45
"D3 - 2023 BASE, AM" model duration: 07:45 - 09:15
"D4 - 2023 BASE, PM" model duration: 16:15 - 17:45
"D5 - 2023 BASE + DEV, AM " model duration: 07:45 - 09:15
"D6 - 2023 BASE + DEV, PM" model duration: 16:15 - 17:45
"D8 - 2023 BASE + DEV + Seasonality, PM" model duration: 16:15 - 17:45
"D9 - Secondary 2023 BASE + DEV, AM" model duration: 07:45 - 09:15
"D11 - Secondary 2023 BASE + DEV + Seasonality, PM" model duration: 16:15 - 17:45
"D13 - 2023 BASE Seasonality, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 18:05:39

File summary

Title	(untitled)
Location	
Site Number	
Date	28/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	RogersA2
Description	

Analysis Options

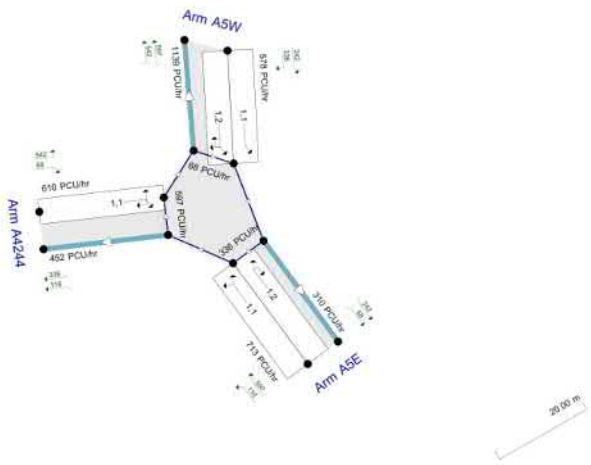
Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Entry Lane Analysis Options

Stop Criteria (%)	Random Seed	Results Refresh Speed (s)	Individual Vehicle Animation Number Of Trials	Time Step Size (s)	Last Run Random Seed	Last Run Number Of Trials
5.00	-1	3	1	10	1271232193	701



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2023 BASE + DEV, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Last Run	Entry Lane Analysis	Arm A4244 - Entry Lane Analysis	Arm A4244: Queue at end of modelled period is greater than 10 PCU. Delay for these vehicles has NOT been included in calculations. You may want to increase the modelled period to take account of these vehicles.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	Entry Lane Simulation		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 BASE + DEV, AM	2023 BASE + DEV	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	A5 LLYS Y GWYNT	Roundabout	A5E,A4244,A5W			174.18	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
A5E	A5E	(untitled)	
A4244	A4244	(untitled)	
A5W	A5W	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
A5E	0.00	99999.00
A4244	0.00	99999.00
A5W	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A5E	3.75	3.75	0.00	35.00	35.00	39.00	
A4244	3.75	5.30	5.50	25.00	35.00	25.00	
A5W	7.45	8.50	4.10	28.00	35.00	33.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A5E		(calculated)	(calculated)	0.532	1124.577
A4244		(calculated)	(calculated)	0.603	1420.724
A5W		(calculated)	(calculated)	0.803	2440.867

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
A5E	Percentage			120.00
A4244	Percentage			80.00
A5W	None			

Entry Lane Analysis: Arm options

Arm	Lane Capacity Source	Traffic Considering Secondary Lanes (%)
A5E	Evenly split	10.00
A4244	Evenly split	10.00
A5W	Evenly split	10.00

Lanes

Arm	Lane Level	Lane	Has Limited Storage	Storage (PCU)	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
A5E	1	1		Infinity	0.00	99999.00
A5E	1	2		Infinity	0.00	99999.00
A4244	1	1		Infinity	0.00	99999.00
A5W	1	1		Infinity	0.00	99999.00
A5W	1	2		Infinity	0.00	99999.00

Entry Lane slope and intercept

Arm	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A5E	(calculated)	(calculated)	0.266	562.289
A5E	(calculated)	(calculated)	0.266	562.289
A4244	(calculated)	(calculated)	0.603	1420.724
A5W	(calculated)	(calculated)	0.401	1220.433
A5W	(calculated)	(calculated)	0.401	1220.433

Lane Movements

Junction	Arm	Lane Level	Lane	Arm		
				A5E	A4244	A5W
1	A5E	1	1		✓	✓
1	A5E	1	2	✓		✓
1	A4244	1	1	✓	✓	✓
1	A5W	1	1	✓		
1	A5W	1	2	✓	✓	✓

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A5E	ONE HOUR	✓	952.00	100.000
A4244	ONE HOUR	✓	808.00	100.000
A5W	ONE HOUR	✓	758.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A5E	716.72	716.72		
07:45-08:00	A4244	608.30	608.30		
07:45-08:00	A5W	570.66	570.66		
08:00-08:15	A5E	855.83	855.83		
08:00-08:15	A4244	726.38	726.38		
08:00-08:15	A5W	681.43	681.43		
08:15-08:30	A5E	1048.17	1048.17		
08:15-08:30	A4244	889.62	889.62		
08:15-08:30	A5W	834.57	834.57		
08:30-08:45	A5E	1048.17	1048.17		
08:30-08:45	A4244	889.62	889.62		
08:30-08:45	A5W	834.57	834.57		
08:45-09:00	A5E	855.83	855.83		
08:45-09:00	A4244	726.38	726.38		
08:45-09:00	A5W	681.43	681.43		
09:00-09:15	A5E	716.72	716.72		
09:00-09:15	A4244	608.30	608.30		
09:00-09:15	A5W	570.66	570.66		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	0.000	148.000	804.000
	A4244	88.000	0.000	720.000
	A5W	310.000	448.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	0.00	0.16	0.84
	A4244	0.11	0.00	0.89
	A5W	0.41	0.59	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	1.000	1.000	1.000
	A4244	1.000	1.000	1.000
	A5W	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	0.0	0.0	0.0
	A4244	0.0	0.0	0.0
	A5W	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)
A5E	97.22	31.61	73.87	F	873.21	1309.81	971.50	44.50	10.79
A4244	425.80	90.63	139.95	F	742.08	1113.12	3867.04	208.44	42.97
A5W	1.97	0.45	2.24	A	694.09	1041.14	27.93	1.61	0.31

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	717.00	179.25	713.32	310.27	335.95	0.00	1.72	8.382	A
A4244	612.07	153.02	610.36	452.35	596.92	0.00	2.16	11.291	B
A5W	576.98	144.24	577.92	1138.97	68.30	0.00	0.17	1.213	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	859.00	214.75	867.05	366.68	394.92	0.00	3.67	15.305	C
A4244	720.51	180.13	720.60	536.66	725.31	0.00	9.06	34.869	D
A5W	682.77	170.69	680.71	1365.02	80.88	0.00	0.32	1.492	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1054.15	263.54	1000.49	414.61	488.99	3.67	20.98	52.499	F
A4244	885.96	221.49	722.23	635.78	853.69	9.06	49.68	148.675	F
A5W	826.82	206.70	825.88	1498.20	77.72	0.32	0.45	1.941	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1037.72	259.43	1018.97	409.64	493.10	20.98	31.61	97.220	F
A4244	904.37	226.09	719.06	649.04	863.02	49.68	90.63	351.739	F
A5W	828.27	207.07	825.88	1505.22	76.86	0.45	0.45	1.970	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	854.38	213.59	886.90	360.26	401.00	31.61	7.08	56.588	F
A4244	724.19	181.05	780.34	538.46	749.44	90.63	85.92	425.805	F
A5W	676.78	169.19	676.35	1444.88	84.91	0.45	0.30	1.483	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	717.00	179.25	713.15	325.34	340.14	7.08	1.85	11.266	B
A4244	605.39	151.35	791.04	457.23	596.06	85.92	35.51	242.461	F
A5W	572.95	143.24	574.58	1296.21	90.90	0.30	0.18	1.248	A

Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	24.83	1.66	8.382	A	A
A4244	28.03	1.87	11.291	B	B
A5W	2.88	0.19	1.213	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	53.96	3.60	15.305	C	B
A4244	100.33	6.69	34.869	D	C
A5W	4.24	0.28	1.492	A	A

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	210.43	14.03	52.499	F	D
A4244	442.28	29.49	148.675	F	F
A5W	6.76	0.45	1.941	A	A

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	404.01	26.93	97.220	F	F
A4244	1052.35	70.16	351.739	F	F
A5W	6.86	0.46	1.970	A	A

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	239.76	15.98	56.588	F	E
A4244	1341.21	89.41	425.805	F	F
A5W	4.20	0.28	1.483	A	A

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	38.50	2.57	11.266	B	B
A4244	902.84	60.19	242.461	F	F
A5W	3.00	0.20	1.248	A	A

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1.72	0.00	0.58	3.95	5.60
A4244	2.16	0.00	0.48	5.46	7.22
A5W	0.17	0.00	0.00	0.27	0.84

Queue Variation results: (08:00-08:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	3.67	0.00	2.11	8.32	11.50
A4244	9.06	0.00	6.17	21.24	27.42
A5W	0.32	0.00	0.00	0.87	1.72

Queue Variation results: (08:15-08:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	20.98	1.05	17.25	41.99	49.66
A4244	49.68	16.02	47.96	75.98	86.59
A5W	0.45	0.00	0.00	1.27	2.24

Queue Variation results: (08:30-08:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	31.61	1.94	26.77	65.74	73.87
A4244	90.63	44.34	90.65	126.99	135.48
A5W	0.45	0.00	0.00	1.18	2.00

Queue Variation results: (08:45-09:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	7.08	0.00	2.55	18.23	30.24
A4244	85.92	30.01	84.36	131.45	139.95
A5W	0.30	0.00	0.00	0.79	1.50

Queue Variation results: (09:00-09:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1.85	0.00	0.68	4.32	5.78
A4244	35.51	0.00	28.50	81.56	96.90
A5W	0.18	0.00	0.00	0.28	0.91

Lane Results

Lanes: Main Results for each time segment

Main results: (07:45-08:00)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	372.75	93.19	369.76	567.55	0.657	0.00	0.98	8.782	A
A5E	1	2	344.25	86.06	343.57	567.55	0.607	0.00	0.74	7.940	A
A4244	1	1	612.07	153.02	610.36	848.49	0.721	0.00	2.16	11.291	B
A5W	1	1	163.05	40.76	163.22	1193.02	0.137	0.00	0.02	0.580	A
A5W	1	2	413.92	103.48	414.69	1193.02	0.347	0.00	0.15	1.453	A

Main results: (08:00-08:15)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	439.69	109.92	448.25	548.73	0.801	0.98	1.95	15.906	C
A5E	1	2	419.32	104.83	418.80	548.73	0.764	0.74	1.72	14.664	B
A4244	1	1	720.51	180.13	720.60	786.52	0.916	2.16	9.06	34.869	D
A5W	1	1	195.66	48.92	196.60	1187.97	0.165	0.02	0.03	0.669	A
A5W	1	2	487.10	121.78	484.11	1187.97	0.410	0.15	0.29	1.822	A

Main results: (08:15-08:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	535.89	133.97	504.48	518.72	1.033	1.95	10.70	53.434	F
A5E	1	2	518.26	129.56	496.01	518.72	0.999	1.72	10.28	51.545	F
A4244	1	1	885.96	221.49	722.23	724.56	1.223	9.06	49.68	148.675	F
A5W	1	1	246.42	61.60	245.14	1189.24	0.207	0.03	0.06	0.857	A
A5W	1	2	580.40	145.10	580.74	1189.24	0.488	0.29	0.39	2.401	A

Main results: (08:30-08:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	524.76	131.19	515.78	517.41	1.014	10.70	16.03	98.544	F
A5E	1	2	512.95	128.24	503.20	517.41	0.991	10.28	15.58	95.891	F
A4244	1	1	904.37	226.09	719.06	720.06	1.256	49.68	90.63	351.739	F
A5W	1	1	242.91	60.73	243.00	1189.58	0.204	0.06	0.05	0.831	A
A5W	1	2	585.36	146.34	582.88	1189.58	0.492	0.39	0.40	2.453	A

Main results: (08:45-09:00)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	428.05	107.01	448.84	546.80	0.783	16.03	3.67	57.154	F
A5E	1	2	426.33	106.58	438.06	546.80	0.780	15.58	3.42	56.006	F
A4244	1	1	724.19	181.05	780.34	774.87	0.935	90.63	85.92	425.805	F
A5W	1	1	191.81	47.95	192.92	1186.35	0.162	0.05	0.03	0.685	A
A5W	1	2	484.96	121.24	483.42	1186.35	0.409	0.40	0.26	1.800	A

Main results: (09:00-09:15)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	374.21	93.55	372.41	566.21	0.661	3.67	0.99	11.606	B
A5E	1	2	342.80	85.70	340.74	566.21	0.605	3.42	0.86	10.892	B
A4244	1	1	605.39	151.35	791.04	848.90	0.713	85.92	35.51	242.461	F
A5W	1	1	160.23	40.06	160.31	1183.95	0.135	0.03	0.03	0.599	A
A5W	1	2	412.72	103.18	414.27	1183.95	0.349	0.26	0.15	1.495	A

Lanes: Queueing Delay Results for each time segment

Queueing Delay results: (07:45-08:00)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	13.65	0.91	8.782	A	A
A5E	1	2	11.18	0.75	7.940	A	A
A4244	1	1	28.03	1.87	11.291	B	B
A5W	1	1	0.38	0.03	0.580	A	A
A5W	1	2	2.50	0.17	1.453	A	A

Queueing Delay results: (08:00-08:15)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	28.94	1.93	15.906	C	B
A5E	1	2	25.03	1.67	14.664	B	B
A4244	1	1	100.33	6.69	34.869	D	C
A5W	1	1	0.54	0.04	0.669	A	A
A5W	1	2	3.69	0.25	1.822	A	A

Queueing Delay results: (08:15-08:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	108.05	7.20	53.434	F	D
A5E	1	2	102.38	6.83	51.545	F	D
A4244	1	1	442.28	29.49	148.675	F	F
A5W	1	1	0.89	0.06	0.857	A	A
A5W	1	2	5.87	0.39	2.401	A	A

Queueing Delay results: (08:30-08:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	205.46	13.70	98.544	F	F
A5E	1	2	198.54	13.24	95.891	F	F
A4244	1	1	1052.35	70.16	351.739	F	F
A5W	1	1	0.86	0.06	0.831	A	A
A5W	1	2	6.00	0.40	2.453	A	A

Queueing Delay results: (08:45-09:00)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	122.69	8.18	57.154	F	E
A5E	1	2	117.07	7.80	56.006	F	E
A4244	1	1	1341.21	89.41	425.805	F	F
A5W	1	1	0.55	0.04	0.685	A	A
A5W	1	2	3.65	0.24	1.800	A	A

Queueing Delay results: (09:00-09:15)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	20.67	1.38	11.606	B	B
A5E	1	2	17.83	1.19	10.892	B	B
A4244	1	1	902.84	60.19	242.461	F	F
A5W	1	1	0.39	0.03	0.599	A	A
A5W	1	2	2.60	0.17	1.495	A	A

Lanes: Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.98	0.00	0.00	2.45	3.17
A5E	1	2	0.74	0.00	0.00	1.83	2.63
A4244	1	1	2.16	0.00	0.48	5.46	7.22
A5W	1	1	0.02	0.00	0.00	0.00	0.00
A5W	1	2	0.15	0.00	0.00	0.07	0.73

Queue Variation results: (08:00-08:15)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	1.95	0.00	0.86	4.44	5.60
A5E	1	2	1.72	0.00	0.58	3.94	5.70
A4244	1	1	9.06	0.00	6.17	21.24	27.42
A5W	1	1	0.03	0.00	0.00	0.00	0.00
A5W	1	2	0.29	0.00	0.00	0.76	1.62

Queue Variation results: (08:15-08:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	10.70	0.00	8.63	21.07	24.60
A5E	1	2	10.28	0.00	8.25	20.46	24.49
A4244	1	1	49.68	16.02	47.96	75.98	86.59
A5W	1	1	0.06	0.00	0.00	0.00	0.03
A5W	1	2	0.39	0.00	0.00	1.11	2.11

Queue Variation results: (08:30-08:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	16.03	0.84	13.38	33.08	36.77
A5E	1	2	15.58	0.41	12.83	31.99	36.88
A4244	1	1	90.63	44.34	90.65	126.99	135.48
A5W	1	1	0.05	0.00	0.00	0.00	0.00
A5W	1	2	0.40	0.00	0.00	1.02	1.97

Queue Variation results: (08:45-09:00)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	3.67	0.00	1.26	9.11	15.37
A5E	1	2	3.42	0.00	0.95	9.21	15.14
A4244	1	1	85.92	30.01	84.36	131.45	139.95
A5W	1	1	0.03	0.00	0.00	0.00	0.00
A5W	1	2	0.26	0.00	0.00	0.85	1.39

Queue Variation results: (09:00-09:15)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.99	0.00	0.00	2.32	3.16
A5E	1	2	0.86	0.00	0.00	2.02	2.84
A4244	1	1	35.51	0.00	28.50	81.56	96.90
A5W	1	1	0.03	0.00	0.00	0.00	0.00
A5W	1	2	0.15	0.00	0.00	0.00	0.84

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A5 - A4244 ENTRY LANE.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A5 - A4244 rbt\2018 DF
Report generation date: 14/06/2018 18:20:36

« (Default Analysis Set) - 2023 BASE + DEV, PM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Direct/Resultant Flows
» Turning Proportions
» Vehicle Mix
» Results
» Lane Results

Summary of junction performance

	PM				
	Queue (PCU)	95% Queue (PCU)	Delay (s)	RFC	LOS
	A1 [Entry Lane Simulation] - 2023 BASE + DEV				
Arm A5E	1.63	6.00	10.84	N/A	B
Arm A4244	1.88	7.00	9.55	N/A	A
Arm A5W	1.80	6.29	4.47	N/A	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017, AM" model duration: 07:45 - 09:15
"D2 - 2017, PM" model duration: 16:15 - 17:45
"D3 - 2023 BASE, AM" model duration: 07:45 - 09:15
"D4 - 2023 BASE, PM" model duration: 16:15 - 17:45
"D5 - 2023 BASE + DEV, AM" model duration: 07:45 - 09:15
"D6 - 2023 BASE + DEV, PM " model duration: 16:15 - 17:45
"D8 - 2023 BASE + DEV + Seasonality, PM" model duration: 16:15 - 17:45
"D13 - 2023 BASE Seasonality, PM" model duration: 16:15 - 17:45

Run using Junctions 8.0.6.541 at 14/06/2018 18:20:34

File summary

Title	(untitled)
Location	
Site Number	
Date	28/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	RogersA2
Description	

Analysis Options

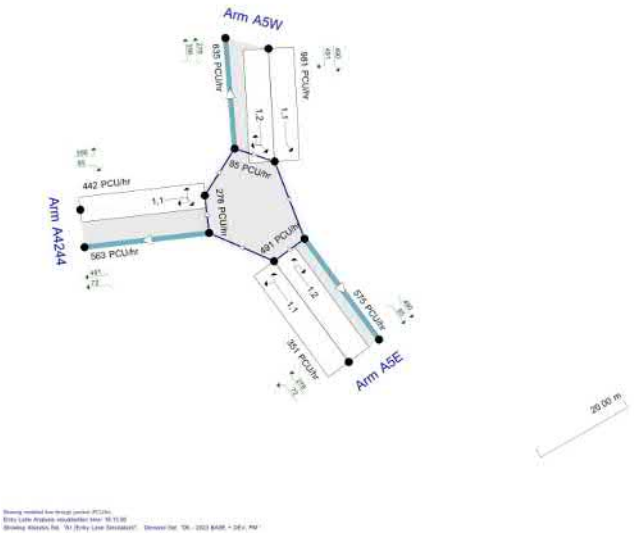
Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Entry Lane Analysis Options

Stop Criteria (%)	Random Seed	Results Refresh Speed (s)	Individual Vehicle Animation Number Of Trials	Time Step Size (s)	Last Run Random Seed	Last Run Number Of Trials
5.00	-1	3	1	10	1606682605	220



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2023 BASE + DEV, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Entry Lane Analysis	A1 [Entry Lane Simulation]	This analysis set uses entry lane simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	Entry Lane Simulation		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2023 BASE + DEV, PM	2023 BASE + DEV	PM		ONE HOUR	16:15	17:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	A5 LLYS Y GWYNT	Roundabout	A5E,A4244,A5W			7.01	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
A5E	A5E	(untitled)	
A4244	A4244	(untitled)	
A5W	A5W	(untitled)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
A5E	0.00	99999.00
A4244	0.00	99999.00
A5W	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
A5E	3.75	3.75	0.00	35.00	35.00	39.00	
A4244	3.75	5.30	5.50	25.00	35.00	25.00	
A5W	7.45	8.50	4.10	28.00	35.00	33.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A5E		(calculated)	(calculated)	0.532	1124.577
A4244		(calculated)	(calculated)	0.603	1420.724
A5W		(calculated)	(calculated)	0.803	2440.867

The slope and intercept shown above include any corrections and adjustments.

Arm Capacity Adjustments

Arm	Type	Reason	Direct Capacity Adjustment (PCU/hr)	Percentage Capacity Adjustment (%)
A5E	Percentage			120.00
A4244	Percentage			80.00
A5W	None			

Entry Lane Analysis: Arm options

Arm	Lane Capacity Source	Traffic Considering Secondary Lanes (%)
A5E	Evenly split	10.00
A4244	Evenly split	10.00
A5W	Evenly split	10.00

Lanes

Arm	Lane Level	Lane	Has Limited Storage	Storage (PCU)	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
A5E	**1**	1		Infinity	0.00	99999.00
A5E	**1**	2		Infinity	0.00	99999.00
A4244	**1**	1		Infinity	0.00	99999.00
A5W	**1**	1		Infinity	0.00	99999.00
A5W	**1**	2		Infinity	0.00	99999.00

Entry Lane slope and intercept

Arm	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
A5E	(calculated)	(calculated)	0.266	562.289
A5E	(calculated)	(calculated)	0.266	562.289
A4244	(calculated)	(calculated)	0.603	1420.724
A5W	(calculated)	(calculated)	0.401	1220.433
A5W	(calculated)	(calculated)	0.401	1220.433

Lane Movements

Junction	Arm	Lane Level	Lane	Arm		
				A5E	A4244	A5W
1	**A5E**	**1**	**1**		✓	✓
1	**A5E**	**1**	**2**	✓		✓
1	**A4244**	**1**	**1**	✓	✓	✓
1	**A5W**	**1**	**1**	✓		
1	**A5W**	**1**	**2**	✓	✓	✓

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A5E	ONE HOUR	✓	471.00	100.000
A4244	ONE HOUR	✓	593.00	100.000
A5W	ONE HOUR	✓	1307.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:15-16:30	**A5E**	354.59	354.59		
16:15-16:30	**A4244**	446.44	446.44		
16:15-16:30	**A5W**	983.98	983.98		
16:30-16:45	**A5E**	423.42	423.42		
16:30-16:45	**A4244**	533.09	533.09		
16:30-16:45	**A5W**	1174.97	1174.97		
16:45-17:00	**A5E**	518.58	518.58		
16:45-17:00	**A4244**	652.91	652.91		
16:45-17:00	**A5W**	1439.03	1439.03		
17:00-17:15	**A5E**	518.58	518.58		
17:00-17:15	**A4244**	652.91	652.91		
17:00-17:15	**A5W**	1439.03	1439.03		
17:15-17:30	**A5E**	423.42	423.42		
17:15-17:30	**A4244**	533.09	533.09		
17:15-17:30	**A5W**	1174.97	1174.97		
17:30-17:45	**A5E**	354.59	354.59		
17:30-17:45	**A4244**	446.44	446.44		
17:30-17:45	**A5W**	983.98	983.98		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	0.000	104.000	367.000
	A4244	120.000	0.000	473.000
	A5W	671.000	636.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	0.00	0.22	0.78
	A4244	0.20	0.00	0.80
	A5W	0.51	0.49	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	1.000	1.000	1.000
	A4244	1.000	1.000	1.000
	A5W	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A5E	A4244	A5W
From	A5E	0.0	0.0	0.0
	A4244	0.0	0.0	0.0
	A5W	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)
A5E	10.84	1.63	6.00	B	435.36	653.05	83.37	7.66	0.93
A4244	9.55	1.88	7.00	A	543.77	815.66	85.79	6.31	0.95
A5W	4.47	1.80	6.29	A	1196.45	1794.68	98.74	3.30	1.10

Main Results for each time segment

Main results: (16:15-16:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	351.27	87.82	350.73	575.45	491.18	0.00	0.50	4.858	A
A4244	443.45	110.86	441.82	563.45	278.45	0.00	0.36	3.354	A
A5W	981.00	245.25	981.27	634.91	85.36	0.00	0.62	2.154	A

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	437.45	109.36	441.00	718.64	562.36	0.00	0.75	6.605	A
A4244	532.36	133.09	543.55	666.00	337.36	0.00	0.65	4.841	A
A5W	1161.27	290.32	1167.82	767.73	113.18	0.00	0.72	2.860	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	538.09	134.52	530.18	866.45	710.18	0.75	1.63	10.260	B
A4244	650.18	162.55	648.82	817.64	422.73	0.65	1.62	9.204	A
A5W	1437.00	359.25	1442.73	937.64	133.91	0.72	1.80	4.356	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	512.73	128.18	513.27	870.27	695.18	1.63	1.39	10.844	B
A4244	657.55	164.39	642.27	807.27	401.18	1.62	1.88	9.551	A
A5W	1427.18	356.80	1437.55	915.55	127.91	1.80	1.65	4.468	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	417.82	104.45	413.73	724.09	562.36	1.39	0.78	6.678	A
A4244	540.82	135.20	534.00	654.27	321.82	1.88	0.80	5.156	A
A5W	1185.82	296.45	1185.27	754.64	101.18	1.65	0.91	2.960	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	354.82	88.70	359.45	595.91	476.18	0.78	0.41	4.889	A
A4244	438.27	109.57	450.27	555.00	280.64	0.80	0.29	3.365	A
A5W	986.45	246.61	984.55	643.36	87.55	0.91	0.59	2.081	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	7.07	0.47	4.858	A	A
A4244	6.31	0.42	3.354	A	A
A5W	8.86	0.59	2.154	A	A

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	11.71	0.78	6.605	A	A
A4244	10.70	0.71	4.841	A	A
A5W	13.99	0.93	2.860	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	21.90	1.46	10.260	B	B
A4244	24.79	1.65	9.204	A	A
A5W	25.98	1.73	4.356	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	23.51	1.57	10.844	B	B
A4244	25.96	1.73	9.551	A	A
A5W	26.64	1.78	4.468	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	11.81	0.79	6.678	A	A
A4244	11.78	0.79	5.156	A	A
A5W	14.61	0.97	2.960	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	7.37	0.49	4.889	A	A
A4244	6.24	0.42	3.365	A	A
A5W	8.67	0.58	2.081	A	A

Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	0.50	0.00	0.00	1.12	1.76
A4244	0.36	0.00	0.00	0.80	1.86
A5W	0.62	0.00	0.00	1.94	2.71

Queue Variation results: (16:30-16:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	0.75	0.00	0.00	1.78	2.50
A4244	0.65	0.00	0.00	1.88	3.20
A5W	0.72	0.00	0.00	1.85	2.88

Queue Variation results: (16:45-17:00)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1.63	0.00	0.40	3.86	6.00
A4244	1.62	0.00	0.03	3.90	6.00
A5W	1.80	0.00	0.39	4.75	6.29

Queue Variation results: (17:00-17:15)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1.39	0.00	0.35	3.14	4.71
A4244	1.88	0.00	0.28	4.91	7.00
A5W	1.65	0.00	0.00	5.09	6.20

Queue Variation results: (17:15-17:30)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	0.78	0.00	0.00	1.86	2.89
A4244	0.80	0.00	0.00	2.23	3.14
A5W	0.91	0.00	0.00	2.46	3.50

Queue Variation results: (17:30-17:45)

Arm	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	0.41	0.00	0.00	0.93	1.62
A4244	0.29	0.00	0.00	0.55	1.40
A5W	0.59	0.00	0.00	1.62	2.38

Lane Results

Lanes: Main Results for each time segment

Main results: (16:15-16:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	197.73	49.43	196.91	518.02	0.382	0.00	0.30	5.261	A
A5E	1	2	153.55	38.39	153.82	518.02	0.296	0.00	0.20	4.341	A
A4244	1	1	443.45	110.86	441.82	1002.19	0.442	0.00	0.36	3.354	A
A5W	1	1	345.27	86.32	347.45	1186.17	0.291	0.00	0.12	1.168	A
A5W	1	2	635.73	158.93	633.82	1186.17	0.536	0.00	0.50	2.709	A

Main results: (16:30-16:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	245.45	61.36	245.73	495.31	0.496	0.30	0.45	7.133	A
A5E	1	2	192.00	48.00	195.27	495.31	0.388	0.20	0.30	5.952	A
A4244	1	1	532.36	133.09	543.55	973.76	0.547	0.36	0.65	4.841	A
A5W	1	1	446.73	111.68	441.00	1175.00	0.380	0.12	0.23	1.557	A
A5W	1	2	714.55	178.64	726.82	1175.00	0.608	0.50	0.50	3.648	A

Main results: (16:45-17:00)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	286.64	71.66	278.45	448.14	0.640	0.45	0.99	11.131	B
A5E	1	2	251.45	62.86	251.73	448.14	0.561	0.30	0.64	9.229	A
A4244	1	1	650.18	162.55	648.82	932.56	0.697	0.65	1.62	9.204	A
A5W	1	1	581.18	145.30	575.73	1166.68	0.498	0.23	0.42	2.453	A
A5W	1	2	855.82	213.95	867.00	1166.68	0.734	0.50	1.38	5.595	A

Main results: (17:00-17:15)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	273.82	68.45	277.64	452.93	0.605	0.99	0.80	11.704	B
A5E	1	2	238.91	59.73	235.64	452.93	0.527	0.64	0.58	9.822	A
A4244	1	1	657.55	164.39	642.27	942.96	0.697	1.62	1.88	9.551	A
A5W	1	1	558.27	139.57	566.45	1169.09	0.478	0.42	0.34	2.441	A
A5W	1	2	868.91	217.23	871.09	1169.09	0.743	1.38	1.32	5.789	A

Main results: (17:15-17:30)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	231.55	57.89	234.27	495.31	0.467	0.80	0.45	7.213	A
A5E	1	2	186.27	46.57	179.45	495.31	0.376	0.58	0.33	6.019	A
A4244	1	1	540.82	135.20	534.00	981.26	0.551	1.88	0.80	5.156	A
A5W	1	1	450.00	112.50	452.45	1179.82	0.381	0.34	0.16	1.621	A
A5W	1	2	735.82	183.95	732.82	1179.82	0.624	1.32	0.75	3.768	A

Main results: (17:30-17:45)

Arm	Lane Level	Lane	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
A5E	1	1	199.64	49.91	201.82	522.81	0.382	0.45	0.25	5.218	A
A5E	1	2	155.18	38.80	157.64	522.81	0.297	0.33	0.16	4.462	A
A4244	1	1	438.27	109.57	450.27	1001.14	0.438	0.80	0.29	3.365	A
A5W	1	1	351.00	87.75	353.73	1185.29	0.296	0.16	0.08	1.129	A
A5W	1	2	635.45	158.86	630.82	1185.29	0.536	0.75	0.51	2.622	A

Lanes: Queueing Delay Results for each time segment

Queueing Delay results: (16:15-16:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	4.31	0.29	5.261	A	A
A5E	1	2	2.76	0.18	4.341	A	A
A4244	1	1	6.31	0.42	3.354	A	A
A5W	1	1	1.73	0.12	1.168	A	A
A5W	1	2	7.13	0.48	2.709	A	A

Queueing Delay results: (16:30-16:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	6.98	0.47	7.133	A	A
A5E	1	2	4.73	0.32	5.952	A	A
A4244	1	1	10.70	0.71	4.841	A	A
A5W	1	1	2.88	0.19	1.557	A	A
A5W	1	2	11.11	0.74	3.648	A	A

Queueing Delay results: (16:45-17:00)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	12.88	0.86	11.131	B	B
A5E	1	2	9.02	0.60	9.229	A	A
A4244	1	1	24.79	1.65	9.204	A	A
A5W	1	1	5.77	0.38	2.453	A	A
A5W	1	2	20.21	1.35	5.595	A	A

Queueing Delay results: (17:00-17:15)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	13.80	0.92	11.704	B	B
A5E	1	2	9.72	0.65	9.822	A	A
A4244	1	1	25.96	1.73	9.551	A	A
A5W	1	1	5.74	0.38	2.441	A	A
A5W	1	2	20.89	1.39	5.789	A	A

Queueing Delay results: (17:15-17:30)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	7.04	0.47	7.213	A	A
A5E	1	2	4.77	0.32	6.019	A	A
A4244	1	1	11.78	0.79	5.156	A	A
A5W	1	1	3.02	0.20	1.621	A	A
A5W	1	2	11.60	0.77	3.768	A	A

Queueing Delay results: (17:30-17:45)

Arm	Lane Level	Lane	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
A5E	1	1	4.44	0.30	5.218	A	A
A5E	1	2	2.93	0.20	4.462	A	A
A4244	1	1	6.24	0.42	3.365	A	A
A5W	1	1	1.68	0.11	1.129	A	A
A5W	1	2	6.99	0.47	2.622	A	A

Lanes: Queue Variation Results for each time segment

Queue Variation results: (16:15-16:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.30	0.00	0.00	0.77	1.25
A5E	1	2	0.20	0.00	0.00	0.46	0.88
A4244	1	1	0.36	0.00	0.00	0.80	1.86
A5W	1	1	0.12	0.00	0.00	0.00	0.67
A5W	1	2	0.50	0.00	0.00	1.56	2.36

Queue Variation results: (16:30-16:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.45	0.00	0.00	0.93	1.54
A5E	1	2	0.30	0.00	0.00	0.76	1.20
A4244	1	1	0.65	0.00	0.00	1.88	3.20
A5W	1	1	0.23	0.00	0.00	0.47	1.13
A5W	1	2	0.50	0.00	0.00	1.44	2.29

Queue Variation results: (16:45-17:00)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.99	0.00	0.00	2.44	3.33
A5E	1	2	0.64	0.00	0.00	1.70	2.50
A4244	1	1	1.62	0.00	0.03	3.90	6.00
A5W	1	1	0.42	0.00	0.00	1.31	2.00
A5W	1	2	1.38	0.00	0.00	3.67	4.75

Queue Variation results: (17:00-17:15)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.80	0.00	0.00	1.91	2.57
A5E	1	2	0.58	0.00	0.00	1.47	2.11
A4244	1	1	1.88	0.00	0.28	4.91	7.00
A5W	1	1	0.34	0.00	0.00	1.00	1.79
A5W	1	2	1.32	0.00	0.00	3.88	6.00

Queue Variation results: (17:15-17:30)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.45	0.00	0.00	1.06	1.71
A5E	1	2	0.33	0.00	0.00	0.82	1.31
A4244	1	1	0.80	0.00	0.00	2.23	3.14
A5W	1	1	0.16	0.00	0.00	0.14	0.93
A5W	1	2	0.75	0.00	0.00	2.10	3.22

Queue Variation results: (17:30-17:45)

Arm	Lane Level	Lane	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)
A5E	1	1	0.25	0.00	0.00	0.64	0.97
A5E	1	2	0.16	0.00	0.00	0.30	0.78
A4244	1	1	0.29	0.00	0.00	0.55	1.40
A5W	1	1	0.08	0.00	0.00	0.00	0.27
A5W	1	2	0.51	0.00	0.00	1.50	2.29

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: A5025_A5A_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\A5025-A5a\2018 DF
Report generation date: 15/06/2018 08:09:06

- » (Default Analysis Set) - Base 2017, AM
- » (Default Analysis Set) - Base 2017, PM
- » (Default Analysis Set) - Base 2023, AM
- » (Default Analysis Set) - Base 2023, PM
- » (Default Analysis Set) - Base 2023 + Dev, AM
- » (Default Analysis Set) - Base 2023 + Dev, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A1 - Base 2017								
Stream B-C	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream B-A	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream C-AB	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream C-A	-	-	-	-	-	-	-	-
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
A1 - Base 2023								
Stream B-C	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream B-A	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream C-AB	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream C-A	-	-	-	-	-	-	-	-
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
A1 - Base 2023 + Dev								
Stream B-C	0.13	5.60	0.12	A	0.14	6.01	0.12	A
Stream B-A	0.00	0.00	0.00	A	0.00	0.00	0.00	A
Stream C-AB	0.17	6.72	0.14	A	0.19	7.27	0.15	A
Stream C-A	-	-	-	-	-	-	-	-
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - Base 2017, AM " model duration: 07:15 - 08:45
"D2 - Base 2017, PM" model duration: 15:45 - 17:15
"D3 - Base 2023, AM" model duration: 07:15 - 08:45
"D4 - Base 2023, PM" model duration: 15:45 - 17:15
"D5 - Base 2023 + Dev, AM" model duration: 07:15 - 08:45
"D6 - Base 2023 + Dev, PM" model duration: 15:45 - 17:15

Run using Junctions 8.0.6.541 at 15/06/2018 08:09:01

File summary

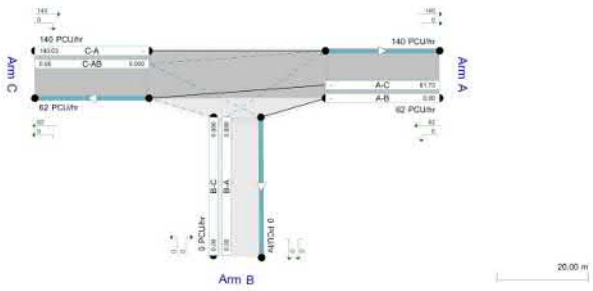
Title	(untitled)
Location	
Site Number	
Date	14/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - Base 2017, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Base 2017, AM	Base 2017	AM		ONE HOUR	07:15	08:45	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	A5025 / A5-A	T-Junction	Two-way	A,B,C	0.00	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5025E		Major
B	B	A5-A		Minor
C	C	A5025W		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.00		0.00		2.20	123.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				7.80	4.60	3.80	3.80	3.80	✓	1.00	98	124

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	578.107	0.101	0.255	0.160	0.364
1	B-C	709.027	0.104	0.263	-	-
1	C-B	645.194	0.239	0.239	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	82.00	100.000
B	ONE HOUR	✓	0.00	100.000
C	ONE HOUR	✓	186.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:15-07:30	A	61.73	61.73		
07:15-07:30	B	0.00	0.00		
07:15-07:30	C	140.03	140.03		
07:30-07:45	A	73.72	73.72		
07:30-07:45	B	0.00	0.00		
07:30-07:45	C	167.21	167.21		
07:45-08:00	A	90.28	90.28		
07:45-08:00	B	0.00	0.00		
07:45-08:00	C	204.79	204.79		
08:00-08:15	A	90.28	90.28		
08:00-08:15	B	0.00	0.00		
08:00-08:15	C	204.79	204.79		
08:15-08:30	A	73.72	73.72		
08:15-08:30	B	0.00	0.00		
08:15-08:30	C	167.21	167.21		
08:30-08:45	A	61.73	61.73		
08:30-08:45	B	0.00	0.00		
08:30-08:45	C	140.03	140.03		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	82.000
	B	0.000	0.000	0.000
	C	186.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.00	1.00
	B	0.33	0.33	0.33
	C	1.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	0.00	0.00	A
B-A	0.00	0.00	0.00	A
C-AB	0.00	0.00	0.00	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:15-07:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	692.81	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	539.97	0.000	0.00	0.000	A
C-AB	0.00	0.00	0.00	933.81	0.000	0.00	0.000	A
C-A	140.03	140.03	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	61.73	61.73	0.00	-	-	-	-	-

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	689.66	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	532.56	0.000	0.00	0.000	A
C-AB	0.00	0.00	0.00	930.66	0.000	0.00	0.000	A
C-A	167.21	167.21	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	73.72	73.72	0.00	-	-	-	-	-

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	685.30	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	522.33	0.000	0.00	0.000	A
C-AB	0.00	0.00	0.00	926.30	0.000	0.00	0.000	A
C-A	204.79	204.79	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	90.28	90.28	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	685.30	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	522.33	0.000	0.00	0.000	A
C-AB	0.00	0.00	0.00	926.30	0.000	0.00	0.000	A
C-A	204.79	204.79	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	90.28	90.28	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	689.66	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	532.56	0.000	0.00	0.000	A
C-AB	0.00	0.00	0.00	930.66	0.000	0.00	0.000	A
C-A	167.21	167.21	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	73.72	73.72	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	692.81	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	539.97	0.000	0.00	0.000	A
C-AB	0.00	0.00	0.00	933.81	0.000	0.00	0.000	A
C-A	140.03	140.03	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	61.73	61.73	0.00	-	-	-	-	-

(Default Analysis Set) - Base 2017, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Base 2017, PM	Base 2017	PM		ONE HOUR	15:45	17:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	A5025 / A5-A	T-Junction	Two-way	A,B,C	0.00	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5025E		Major
B	B	A5-A		Minor
C	C	A5025W		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.00		0.00		2.20	123.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				7.80	4.60	3.80	3.80	3.80	✓	1.00	98	124

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	578.107	0.101	0.255	0.160	0.364
1	B-C	709.027	0.104	0.263	-	-
1	C-B	645.194	0.239	0.239	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	215.00	100.000
B	ONE HOUR	✓	0.00	100.000
C	ONE HOUR	✓	115.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
15:45-16:00	A	161.86	161.86		
15:45-16:00	B	0.00	0.00		
15:45-16:00	C	86.58	86.58		
16:00-16:15	A	193.28	193.28		
16:00-16:15	B	0.00	0.00		
16:00-16:15	C	103.38	103.38		
16:15-16:30	A	236.72	236.72		
16:15-16:30	B	0.00	0.00		
16:15-16:30	C	126.62	126.62		
16:30-16:45	A	236.72	236.72		
16:30-16:45	B	0.00	0.00		
16:30-16:45	C	126.62	126.62		
16:45-17:00	A	193.28	193.28		
16:45-17:00	B	0.00	0.00		
16:45-17:00	C	103.38	103.38		
17:00-17:15	A	161.86	161.86		
17:00-17:15	B	0.00	0.00		
17:00-17:15	C	86.58	86.58		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	215.000
	B	0.000	0.000	0.000
	C	115.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.00	1.00
	B	0.33	0.33	0.33
	C	1.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	0.00	0.00	A
B-A	0.00	0.00	0.00	A
C-AB	0.00	0.00	0.00	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (15:45-16:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	666.50	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	523.04	0.000	0.00	0.000	A
C-AB	0.00	0.00	0.00	907.28	0.000	0.00	0.000	A
C-A	86.58	86.58	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	161.86	161.86	0.00	-	-	-	-	-

Main results: (16:00-16:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	658.24	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	512.35	0.000	0.00	0.000	A
C-AB	0.00	0.00	0.00	898.85	0.000	0.00	0.000	A
C-A	103.38	103.38	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	193.28	193.28	0.00	-	-	-	-	-

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	646.83	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	497.57	0.000	0.00	0.000	A
C-AB	0.00	0.00	0.00	887.11	0.000	0.00	0.000	A
C-A	126.62	126.62	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	236.72	236.72	0.00	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	646.83	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	497.57	0.000	0.00	0.000	A
C-AB	0.00	0.00	0.00	887.11	0.000	0.00	0.000	A
C-A	126.62	126.62	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	236.72	236.72	0.00	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	658.24	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	512.35	0.000	0.00	0.000	A
C-AB	0.00	0.00	0.00	898.85	0.000	0.00	0.000	A
C-A	103.38	103.38	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	193.28	193.28	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	666.50	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	523.04	0.000	0.00	0.000	A
C-AB	0.00	0.00	0.00	907.28	0.000	0.00	0.000	A
C-A	86.58	86.58	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	161.86	161.86	0.00	-	-	-	-	-

(Default Analysis Set) - Base 2023, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Base 2023, AM	Base 2023	AM		ONE HOUR	07:15	08:45	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	A5025 / A5-A	T-Junction	Two-way	A,B,C	0.00	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5025E		Major
B	B	A5-A		Minor
C	C	A5025W		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.00		0.00		2.20	123.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				7.80	4.60	3.80	3.80	3.80	✓	1.00	98	124

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	578.107	0.101	0.255	0.160	0.364
1	B-C	709.027	0.104	0.263	-	-
1	C-B	645.194	0.239	0.239	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	85.00	100.000
B	ONE HOUR	✓	0.00	100.000
C	ONE HOUR	✓	193.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowinPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:15-07:30	A	63.99	63.99		
07:15-07:30	B	0.00	0.00		
07:15-07:30	C	145.30	145.30		
07:30-07:45	A	76.41	76.41		
07:30-07:45	B	0.00	0.00		
07:30-07:45	C	173.50	173.50		
07:45-08:00	A	93.59	93.59		
07:45-08:00	B	0.00	0.00		
07:45-08:00	C	212.50	212.50		
08:00-08:15	A	93.59	93.59		
08:00-08:15	B	0.00	0.00		
08:00-08:15	C	212.50	212.50		
08:15-08:30	A	76.41	76.41		
08:15-08:30	B	0.00	0.00		
08:15-08:30	C	173.50	173.50		
08:30-08:45	A	63.99	63.99		
08:30-08:45	B	0.00	0.00		
08:30-08:45	C	145.30	145.30		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	85.000
	B	0.000	0.000	0.000
	C	193.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.00	1.00
	B	0.33	0.33	0.33
	C	1.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	0.00	0.00	A
B-A	0.00	0.00	0.00	A
C-AB	0.00	0.00	0.00	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:15-07:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	692.21	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	538.55	0.000	0.00	0.000	A
C-AB	0.00	0.00	0.00	933.22	0.000	0.00	0.000	A
C-A	145.30	145.30	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	63.99	63.99	0.00	-	-	-	-	-

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	688.95	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	530.87	0.000	0.00	0.000	A
C-AB	0.00	0.00	0.00	929.95	0.000	0.00	0.000	A
C-A	173.50	173.50	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	76.41	76.41	0.00	-	-	-	-	-

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	684.44	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	520.25	0.000	0.00	0.000	A
C-AB	0.00	0.00	0.00	925.43	0.000	0.00	0.000	A
C-A	212.50	212.50	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	93.59	93.59	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	684.44	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	520.25	0.000	0.00	0.000	A
C-AB	0.00	0.00	0.00	925.43	0.000	0.00	0.000	A
C-A	212.50	212.50	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	93.59	93.59	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	688.95	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	530.87	0.000	0.00	0.000	A
C-AB	0.00	0.00	0.00	929.95	0.000	0.00	0.000	A
C-A	173.50	173.50	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	76.41	76.41	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	692.21	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	538.55	0.000	0.00	0.000	A
C-AB	0.00	0.00	0.00	933.22	0.000	0.00	0.000	A
C-A	145.30	145.30	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	63.99	63.99	0.00	-	-	-	-	-

(Default Analysis Set) - Base 2023, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Base 2023, PM	Base 2023	PM		ONE HOUR	15:45	17:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	A5025 / A5-A	T-Junction	Two-way	A,B,C	0.00	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5025E		Major
B	B	A5-A		Minor
C	C	A5025W		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.00		0.00		2.20	123.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				7.80	4.60	3.80	3.80	3.80	✓	1.00	98	124

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	578.107	0.101	0.255	0.160	0.364
1	B-C	709.027	0.104	0.263	-	-
1	C-B	645.194	0.239	0.239	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	223.00	100.000
B	ONE HOUR	✓	0.00	100.000
C	ONE HOUR	✓	119.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
15:45-16:00	A	167.89	167.89		
15:45-16:00	B	0.00	0.00		
15:45-16:00	C	89.59	89.59		
16:00-16:15	A	200.47	200.47		
16:00-16:15	B	0.00	0.00		
16:00-16:15	C	106.98	106.98		
16:15-16:30	A	245.53	245.53		
16:15-16:30	B	0.00	0.00		
16:15-16:30	C	131.02	131.02		
16:30-16:45	A	245.53	245.53		
16:30-16:45	B	0.00	0.00		
16:30-16:45	C	131.02	131.02		
16:45-17:00	A	200.47	200.47		
16:45-17:00	B	0.00	0.00		
16:45-17:00	C	106.98	106.98		
17:00-17:15	A	167.89	167.89		
17:00-17:15	B	0.00	0.00		
17:00-17:15	C	89.59	89.59		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	223.000
	B	0.000	0.000	0.000
	C	119.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.00	1.00
	B	0.33	0.33	0.33
	C	1.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	0.00	0.00	A
B-A	0.00	0.00	0.00	A
C-AB	0.00	0.00	0.00	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (15:45-16:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	664.91	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	521.02	0.000	0.00	0.000	A
C-AB	0.00	0.00	0.00	905.67	0.000	0.00	0.000	A
C-A	89.59	89.59	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	167.89	167.89	0.00	-	-	-	-	-

Main results: (16:00-16:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	656.35	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	509.94	0.000	0.00	0.000	A
C-AB	0.00	0.00	0.00	896.91	0.000	0.00	0.000	A
C-A	106.98	106.98	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	200.47	200.47	0.00	-	-	-	-	-

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	644.51	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	494.62	0.000	0.00	0.000	A
C-AB	0.00	0.00	0.00	884.71	0.000	0.00	0.000	A
C-A	131.02	131.02	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	245.53	245.53	0.00	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	644.51	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	494.62	0.000	0.00	0.000	A
C-AB	0.00	0.00	0.00	884.71	0.000	0.00	0.000	A
C-A	131.02	131.02	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	245.53	245.53	0.00	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	656.35	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	509.94	0.000	0.00	0.000	A
C-AB	0.00	0.00	0.00	896.91	0.000	0.00	0.000	A
C-A	106.98	106.98	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	200.47	200.47	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	0.00	0.00	0.00	664.91	0.000	0.00	0.000	A
B-A	0.00	0.00	0.00	521.02	0.000	0.00	0.000	A
C-AB	0.00	0.00	0.00	905.67	0.000	0.00	0.000	A
C-A	89.59	89.59	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	167.89	167.89	0.00	-	-	-	-	-

(Default Analysis Set) - Base 2023 + Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Base 2023 + Dev, AM	Base 2023 + Dev	AM		ONE HOUR	07:15	08:45	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	A5025 / A5-A	T-Junction	Two-way	A,B,C	6.17	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5025E		Major
B	B	A5-A		Minor
C	C	A5025W		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.00		0.00		2.20	123.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				7.80	4.60	3.80	3.80	3.80	✓	1.00	98	124

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	480.689	0.084	0.212	0.133	0.302
1	B-C	786.337	0.115	0.291	-	-
1	C-B	645.194	0.239	0.239	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	186.00	100.000
B	ONE HOUR	✓	76.00	100.000
C	ONE HOUR	✓	370.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:15-07:30	A	140.03	140.03		
07:15-07:30	B	57.22	57.22		
07:15-07:30	C	278.56	278.56		
07:30-07:45	A	167.21	167.21		
07:30-07:45	B	68.32	68.32		
07:30-07:45	C	332.62	332.62		
07:45-08:00	A	204.79	204.79		
07:45-08:00	B	83.68	83.68		
07:45-08:00	C	407.38	407.38		
08:00-08:15	A	204.79	204.79		
08:00-08:15	B	83.68	83.68		
08:00-08:15	C	407.38	407.38		
08:15-08:30	A	167.21	167.21		
08:15-08:30	B	68.32	68.32		
08:15-08:30	C	332.62	332.62		
08:30-08:45	A	140.03	140.03		
08:30-08:45	B	57.22	57.22		
08:30-08:45	C	278.56	278.56		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	186.000
	B	0.000	0.000	76.000
	C	294.000	76.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.00	1.00
	B	0.00	0.00	1.00
	C	0.79	0.21	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.12	5.60	0.13	A
B-A	0.00	0.00	0.00	A
C-AB	0.14	6.72	0.17	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:15-07:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	57.22	56.89	0.00	745.53	0.077	0.08	5.225	A
B-A	0.00	0.00	0.00	404.27	0.000	0.00	0.000	A
C-AB	59.15	58.73	0.00	625.22	0.095	0.11	6.351	A
C-A	219.40	219.40	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	140.03	140.03	0.00	-	-	-	-	-

Main results: (07:30-07:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	68.32	68.25	0.00	737.61	0.093	0.10	5.378	A
B-A	0.00	0.00	0.00	389.32	0.000	0.00	0.000	A
C-AB	71.69	71.58	0.00	624.69	0.115	0.13	6.509	A
C-A	260.93	260.93	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	167.21	167.21	0.00	-	-	-	-	-

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	83.68	83.57	0.00	726.66	0.115	0.13	5.598	A
B-A	0.00	0.00	0.00	368.78	0.000	0.00	0.000	A
C-AB	90.05	89.89	0.00	625.86	0.144	0.17	6.715	A
C-A	317.32	317.32	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	204.79	204.79	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	83.68	83.68	0.00	726.66	0.115	0.13	5.598	A
B-A	0.00	0.00	0.00	368.73	0.000	0.00	0.000	A
C-AB	90.05	90.05	0.00	625.86	0.144	0.17	6.721	A
C-A	317.32	317.32	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	204.79	204.79	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	68.32	68.43	0.00	737.61	0.093	0.10	5.380	A
B-A	0.00	0.00	0.00	389.24	0.000	0.00	0.000	A
C-AB	71.69	71.85	0.00	624.69	0.115	0.13	6.513	A
C-A	260.93	260.93	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	167.21	167.21	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	57.22	57.29	0.00	745.53	0.077	0.08	5.230	A
B-A	0.00	0.00	0.00	404.11	0.000	0.00	0.000	A
C-AB	59.15	59.26	0.00	625.22	0.095	0.11	6.361	A
C-A	219.40	219.40	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	140.03	140.03	0.00	-	-	-	-	-

(Default Analysis Set) - Base 2023 + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Base 2023 + Dev, PM	Base 2023 + Dev	PM		ONE HOUR	15:45	17:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	A5025 / A5-A	T-Junction	Two-way	A,B,C	6.65	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A5025E		Major
B	B	A5-A		Minor
C	C	A5025W		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.00		0.00		2.20	123.00	✓	1.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				7.80	4.60	3.80	3.80	3.80	✓	1.00	98	124

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	480.689	0.084	0.212	0.133	0.302
1	B-C	786.337	0.115	0.291	-	-
1	C-B	645.194	0.239	0.239	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	324.00	100.000
B	ONE HOUR	✓	76.00	100.000
C	ONE HOUR	✓	296.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
15:45-16:00	A	243.92	243.92		
15:45-16:00	B	57.22	57.22		
15:45-16:00	C	222.84	222.84		
16:00-16:15	A	291.27	291.27		
16:00-16:15	B	68.32	68.32		
16:00-16:15	C	266.10	266.10		
16:15-16:30	A	356.73	356.73		
16:15-16:30	B	83.68	83.68		
16:15-16:30	C	325.90	325.90		
16:30-16:45	A	356.73	356.73		
16:30-16:45	B	83.68	83.68		
16:30-16:45	C	325.90	325.90		
16:45-17:00	A	291.27	291.27		
16:45-17:00	B	68.32	68.32		
16:45-17:00	C	266.10	266.10		
17:00-17:15	A	243.92	243.92		
17:00-17:15	B	57.22	57.22		
17:00-17:15	C	222.84	222.84		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	324.000
	B	0.000	0.000	76.000
	C	220.000	76.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.00	1.00
	B	0.00	0.00	1.00
	C	0.74	0.26	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.12	6.01	0.14	A
B-A	0.00	0.00	0.00	A
C-AB	0.15	7.27	0.19	A
C-A	-	-	-	-
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (15:45-16:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	57.22	56.87	0.00	715.25	0.080	0.09	5.465	A
B-A	0.00	0.00	0.00	389.70	0.000	0.00	0.000	A
C-AB	58.79	58.35	0.00	597.66	0.098	0.11	6.669	A
C-A	164.05	164.05	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	243.92	243.92	0.00	-	-	-	-	-

Main results: (16:00-16:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	68.32	68.24	0.00	701.46	0.097	0.11	5.685	A
B-A	0.00	0.00	0.00	371.91	0.000	0.00	0.000	A
C-AB	71.11	70.99	0.00	591.31	0.120	0.14	6.916	A
C-A	194.99	194.99	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	291.27	291.27	0.00	-	-	-	-	-

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	83.68	83.55	0.00	682.38	0.123	0.14	6.009	A
B-A	0.00	0.00	0.00	347.46	0.000	0.00	0.000	A
C-AB	89.09	88.90	0.00	584.35	0.152	0.19	7.265	A
C-A	236.81	236.81	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	356.73	356.73	0.00	-	-	-	-	-

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	83.68	83.68	0.00	682.38	0.123	0.14	6.012	A
B-A	0.00	0.00	0.00	347.41	0.000	0.00	0.000	A
C-AB	89.09	89.08	0.00	584.35	0.152	0.19	7.268	A
C-A	236.81	236.81	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	356.73	356.73	0.00	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	68.32	68.44	0.00	701.46	0.097	0.11	5.687	A
B-A	0.00	0.00	0.00	371.82	0.000	0.00	0.000	A
C-AB	71.11	71.29	0.00	591.31	0.120	0.14	6.927	A
C-A	194.99	194.99	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	291.27	291.27	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	57.22	57.30	0.00	715.25	0.080	0.09	5.473	A
B-A	0.00	0.00	0.00	389.53	0.000	0.00	0.000	A
C-AB	58.79	58.91	0.00	597.66	0.098	0.11	6.683	A
C-A	164.05	164.05	0.00	-	-	-	-	-
A-B	0.00	0.00	0.00	-	-	-	-	-
A-C	243.92	243.92	0.00	-	-	-	-	-

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: Pentir AccessFINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\Pentir Access\2018 DF
Report generation date: 15/06/2018 08:13:04

» (Default Analysis Set) - 2017 Base, AM
» (Default Analysis Set) - 2017 Base, PM
» (Default Analysis Set) - 2023 Base, AM
» (Default Analysis Set) - 2023 Base, PM
» (Default Analysis Set) - 2023 Base + Dev, AM
» (Default Analysis Set) - 2023 Base + Dev, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2017 Base							
Stream B-C	0.01	5.92	0.01	A	0.07	6.90	0.06	A
Stream B-A	0.01	8.87	0.01	A	0.03	9.79	0.03	A
Stream C-A	-	-	-	-	-	-	-	-
Stream C-B	0.05	4.89	0.05	A	0.01	5.18	0.01	A
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
	A1 - 2023 Base							
Stream B-C	0.01	5.94	0.01	A	0.07	6.96	0.06	A
Stream B-A	0.01	8.98	0.01	A	0.03	9.97	0.03	A
Stream C-A	-	-	-	-	-	-	-	-
Stream C-B	0.05	4.91	0.05	A	0.01	5.23	0.01	A
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
	A1 - 2023 Base + Dev							
Stream B-C	0.39	8.07	0.28	A	0.46	9.47	0.32	A
Stream B-A	0.03	11.14	0.03	B	0.06	12.92	0.06	B
Stream C-A	-	-	-	-	-	-	-	-
Stream C-B	0.30	6.10	0.23	A	0.34	6.93	0.25	A
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2017 Base, AM " model duration: 07:45 - 09:15
"D2 - 2017 Base, PM" model duration: 16:45 - 18:15
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:45 - 18:15
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.6.541 at 15/06/2018 08:12:59

File summary

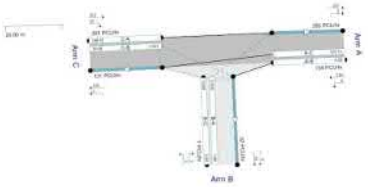
Title	(untitled)
Location	
Site Number	
Date	07/04/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	Rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, AM	2017 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Pentir Access	T-Junction	Two-way	A,B,C	5.31	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	B4547 N		Major
B	B	Pentir Access		Minor
C	C	B4547 S		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.15		0.00	✓	3.63	250.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	5.05	2.85	2.51	2.41	✓	1.00	50	31

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	515.733	0.089	0.226	0.142	0.322
1	B-C	663.533	0.097	0.244	-	-
1	C-B	830.937	0.306	0.306	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	178.00	100.000
B	ONE HOUR	✓	10.00	100.000
C	ONE HOUR	✓	373.20	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	11.000	167.000
	B	2.500	0.000	7.500
	C	341.200	32.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.06	0.94
	B	0.25	0.00	0.75
	C	0.91	0.09	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	5.92	0.01	A
B-A	0.01	8.87	0.01	A
C-A	-	-	-	-
C-B	0.05	4.89	0.05	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	5.65	5.61	0.00	631.36	0.009	0.01	5.752	A
B-A	1.88	1.87	0.00	442.42	0.004	0.00	8.171	A
C-A	256.87	256.87	0.00	-	-	-	-	-
C-B	24.09	23.97	0.00	789.95	0.031	0.03	4.700	A
A-B	8.28	8.28	0.00	-	-	-	-	-
A-C	125.73	125.73	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	6.74	6.73	0.00	625.06	0.011	0.01	5.821	A
B-A	2.25	2.24	0.00	428.20	0.005	0.01	8.451	A
C-A	306.73	306.73	0.00	-	-	-	-	-
C-B	28.77	28.74	0.00	782.00	0.037	0.04	4.778	A
A-B	9.89	9.89	0.00	-	-	-	-	-
A-C	150.13	150.13	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	8.26	8.25	0.00	616.38	0.013	0.01	5.919	A
B-A	2.75	2.75	0.00	408.52	0.007	0.01	8.871	A
C-A	375.67	375.67	0.00	-	-	-	-	-
C-B	35.23	35.19	0.00	771.00	0.046	0.05	4.892	A
A-B	12.11	12.11	0.00	-	-	-	-	-
A-C	183.87	183.87	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	8.26	8.26	0.00	616.37	0.013	0.01	5.919	A
B-A	2.75	2.75	0.00	408.52	0.007	0.01	8.871	A
C-A	375.67	375.67	0.00	-	-	-	-	-
C-B	35.23	35.23	0.00	771.00	0.046	0.05	4.892	A
A-B	12.11	12.11	0.00	-	-	-	-	-
A-C	183.87	183.87	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	6.74	6.75	0.00	625.04	0.011	0.01	5.824	A
B-A	2.25	2.25	0.00	428.21	0.005	0.01	8.451	A
C-A	306.73	306.73	0.00	-	-	-	-	-
C-B	28.77	28.80	0.00	782.00	0.037	0.04	4.781	A
A-B	9.89	9.89	0.00	-	-	-	-	-
A-C	150.13	150.13	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	5.65	5.65	0.00	631.31	0.009	0.01	5.755	A
B-A	1.88	1.89	0.00	442.45	0.004	0.00	8.171	A
C-A	256.87	256.87	0.00	-	-	-	-	-
C-B	24.09	24.12	0.00	789.95	0.031	0.03	4.700	A
A-B	8.28	8.28	0.00	-	-	-	-	-
A-C	125.73	125.73	0.00	-	-	-	-	-

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2017 Base, PM	2017 Base	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Pentir Access	T-Junction	Two-way	A,B,C	7.25	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	B4547 N		Major
B	B	Pentir Access		Minor
C	C	B4547 S		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.15		0.00	✓	3.63	250.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	5.05	2.85	2.51	2.41	✓	1.00	50	31

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	516.481	0.089	0.226	0.142	0.323
1	B-C	663.155	0.097	0.244	-	-
1	C-B	830.937	0.306	0.306	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	378.50	100.000
B	ONE HOUR	✓	43.00	100.000
C	ONE HOUR	✓	265.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	2.500	376.000
	B	11.000	0.000	32.000
	C	257.000	8.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.01	0.99
	B	0.26	0.00	0.74
	C	0.97	0.03	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.06	6.90	0.07	A
B-A	0.03	9.79	0.03	A
C-A	-	-	-	-
C-B	0.01	5.18	0.01	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	24.09	23.92	0.00	590.96	0.041	0.04	6.347	A
B-A	8.28	8.20	0.00	422.91	0.020	0.02	8.681	A
C-A	193.48	193.48	0.00	-	-	-	-	-
C-B	6.02	5.99	0.00	743.79	0.008	0.01	4.879	A
A-B	1.88	1.88	0.00	-	-	-	-	-
A-C	283.07	283.07	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	28.77	28.73	0.00	576.82	0.050	0.05	6.567	A
B-A	9.89	9.87	0.00	404.76	0.024	0.02	9.116	A
C-A	231.04	231.04	0.00	-	-	-	-	-
C-B	7.19	7.18	0.00	726.87	0.010	0.01	5.001	A
A-B	2.25	2.25	0.00	-	-	-	-	-
A-C	338.02	338.02	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	35.23	35.17	0.00	557.27	0.063	0.07	6.895	A
B-A	12.11	12.08	0.00	379.61	0.032	0.03	9.795	A
C-A	282.96	282.96	0.00	-	-	-	-	-
C-B	8.81	8.80	0.00	703.48	0.013	0.01	5.181	A
A-B	2.75	2.75	0.00	-	-	-	-	-
A-C	413.98	413.98	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	35.23	35.23	0.00	557.25	0.063	0.07	6.895	A
B-A	12.11	12.11	0.00	379.63	0.032	0.03	9.795	A
C-A	282.96	282.96	0.00	-	-	-	-	-
C-B	8.81	8.81	0.00	703.48	0.013	0.01	5.181	A
A-B	2.75	2.75	0.00	-	-	-	-	-
A-C	413.98	413.98	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	28.77	28.82	0.00	576.78	0.050	0.05	6.572	A
B-A	9.89	9.92	0.00	404.79	0.024	0.03	9.117	A
C-A	231.04	231.04	0.00	-	-	-	-	-
C-B	7.19	7.20	0.00	726.87	0.010	0.01	5.001	A
A-B	2.25	2.25	0.00	-	-	-	-	-
A-C	338.02	338.02	0.00	-	-	-	-	-

Main results: (18:00-18:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	24.09	24.13	0.00	590.89	0.041	0.04	6.351	A
B-A	8.28	8.30	0.00	422.96	0.020	0.02	8.681	A
C-A	193.48	193.48	0.00	-	-	-	-	-
C-B	6.02	6.03	0.00	743.79	0.008	0.01	4.879	A
A-B	1.88	1.88	0.00	-	-	-	-	-
A-C	283.07	283.07	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, AM	2023 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Pentir Access	T-Junction	Two-way	A,B,C	5.34	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Am	Name	Description	Arm Type
A	A	B4547 N		Major
B	B	Pentir Access		Minor
C	C	B4547 S		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.15		0.00	✓	3.63	250.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	5.05	2.85	2.51	2.41	✓	1.00	50	31

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	515.733	0.089	0.226	0.142	0.322
1	B-C	663.533	0.097	0.244	-	-
1	C-B	830.937	0.306	0.306	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	187.00	100.000
B	ONE HOUR	✓	10.00	100.000
C	ONE HOUR	✓	390.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	11.000	176.000
	B	2.500	0.000	7.500
	C	358.000	32.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.06	0.94
	B	0.25	0.00	0.75
	C	0.92	0.08	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.01	5.94	0.01	A
B-A	0.01	8.98	0.01	A
C-A	-	-	-	-
C-B	0.05	4.91	0.05	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	5.65	5.61	0.00	629.70	0.009	0.01	5.768	A
B-A	1.88	1.87	0.00	439.10	0.004	0.00	8.233	A
C-A	269.52	269.52	0.00	-	-	-	-	-
C-B	24.09	23.97	0.00	787.88	0.031	0.03	4.712	A
A-B	8.28	8.28	0.00	-	-	-	-	-
A-C	132.50	132.50	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	6.74	6.73	0.00	623.08	0.011	0.01	5.840	A
B-A	2.25	2.24	0.00	424.23	0.005	0.01	8.530	A
C-A	321.83	321.83	0.00	-	-	-	-	-
C-B	28.77	28.74	0.00	779.52	0.037	0.04	4.794	A
A-B	9.89	9.89	0.00	-	-	-	-	-
A-C	158.22	158.22	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	8.26	8.25	0.00	613.95	0.013	0.01	5.942	A
B-A	2.75	2.75	0.00	403.66	0.007	0.01	8.979	A
C-A	394.17	394.17	0.00	-	-	-	-	-
C-B	35.23	35.19	0.00	767.97	0.046	0.05	4.912	A
A-B	12.11	12.11	0.00	-	-	-	-	-
A-C	193.78	193.78	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	8.26	8.26	0.00	613.94	0.013	0.01	5.943	A
B-A	2.75	2.75	0.00	403.66	0.007	0.01	8.979	A
C-A	394.17	394.17	0.00	-	-	-	-	-
C-B	35.23	35.23	0.00	767.97	0.046	0.05	4.912	A
A-B	12.11	12.11	0.00	-	-	-	-	-
A-C	193.78	193.78	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	6.74	6.75	0.00	623.05	0.011	0.01	5.840	A
B-A	2.25	2.25	0.00	424.25	0.005	0.01	8.532	A
C-A	321.83	321.83	0.00	-	-	-	-	-
C-B	28.77	28.81	0.00	779.52	0.037	0.04	4.795	A
A-B	9.89	9.89	0.00	-	-	-	-	-
A-C	158.22	158.22	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	5.65	5.65	0.00	629.65	0.009	0.01	5.770	A
B-A	1.88	1.89	0.00	439.13	0.004	0.00	8.233	A
C-A	269.52	269.52	0.00	-	-	-	-	-
C-B	24.09	24.12	0.00	787.88	0.031	0.03	4.713	A
A-B	8.28	8.28	0.00	-	-	-	-	-
A-C	132.50	132.50	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, PM	2023 Base	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Pentir Access	T-Junction	Two-way	A,B,C	7.36	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	B4547 N		Major
B	B	Pentir Access		Minor
C	C	B4547 S		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.15		0.00	✓	3.63	250.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	5.05	2.85	2.51	2.41	✓	1.00	50	31

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	516.481	0.089	0.226	0.142	0.323
1	B-C	663.155	0.097	0.244	-	-
1	C-B	830.937	0.306	0.306	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	397.50	100.000
B	ONE HOUR	✓	43.00	100.000
C	ONE HOUR	✓	276.50	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	2.500	395.000
	B	11.000	0.000	32.000
	C	269.000	7.500	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.01	0.99
	B	0.26	0.00	0.74
	C	0.97	0.03	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.06	6.96	0.07	A
B-A	0.03	9.97	0.03	A
C-A	-	-	-	-
C-B	0.01	5.23	0.01	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	24.09	23.92	0.00	587.46	0.041	0.04	6.386	A
B-A	8.28	8.20	0.00	418.52	0.020	0.02	8.774	A
C-A	202.52	202.52	0.00	-	-	-	-	-
C-B	5.65	5.62	0.00	739.41	0.008	0.01	4.905	A
A-B	1.88	1.88	0.00	-	-	-	-	-
A-C	297.38	297.38	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	28.77	28.73	0.00	572.63	0.050	0.05	6.618	A
B-A	9.89	9.87	0.00	399.52	0.025	0.03	9.239	A
C-A	241.83	241.83	0.00	-	-	-	-	-
C-B	6.74	6.74	0.00	721.65	0.009	0.01	5.035	A
A-B	2.25	2.25	0.00	-	-	-	-	-
A-C	355.10	355.10	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	35.23	35.17	0.00	552.12	0.064	0.07	6.963	A
B-A	12.11	12.08	0.00	373.19	0.032	0.03	9.969	A
C-A	296.17	296.17	0.00	-	-	-	-	-
C-B	8.26	8.25	0.00	697.08	0.012	0.01	5.225	A
A-B	2.75	2.75	0.00	-	-	-	-	-
A-C	434.90	434.90	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	35.23	35.23	0.00	552.10	0.064	0.07	6.964	A
B-A	12.11	12.11	0.00	373.20	0.032	0.03	9.969	A
C-A	296.17	296.17	0.00	-	-	-	-	-
C-B	8.26	8.26	0.00	697.08	0.012	0.01	5.225	A
A-B	2.75	2.75	0.00	-	-	-	-	-
A-C	434.90	434.90	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	28.77	28.83	0.00	572.59	0.050	0.05	6.623	A
B-A	9.89	9.92	0.00	399.55	0.025	0.03	9.241	A
C-A	241.83	241.83	0.00	-	-	-	-	-
C-B	6.74	6.75	0.00	721.65	0.009	0.01	5.037	A
A-B	2.25	2.25	0.00	-	-	-	-	-
A-C	355.10	355.10	0.00	-	-	-	-	-

Main results: (18:00-18:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	24.09	24.13	0.00	587.38	0.041	0.04	6.391	A
B-A	8.28	8.30	0.00	418.57	0.020	0.02	8.776	A
C-A	202.52	202.52	0.00	-	-	-	-	-
C-B	5.65	5.65	0.00	739.41	0.008	0.01	4.907	A
A-B	1.88	1.88	0.00	-	-	-	-	-
A-C	297.38	297.38	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, AM	2023 Base + Dev	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Pentir Access	T-Junction	Two-way	A,B,C	7.18	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	B4547 N		Major
B	B	Pentir Access		Minor
C	C	B4547 S		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.15		0.00	✓	3.63	250.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	5.05	2.85	2.51	2.41	✓	1.00	50	31

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	489.690	0.085	0.214	0.135	0.306
1	B-C	676.701	0.099	0.249	-	-
1	C-B	830.937	0.306	0.306	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	192.00	100.000
B	ONE HOUR	✓	168.00	100.000
C	ONE HOUR	✓	518.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	16.000	176.000
	B	8.000	0.000	160.000
	C	358.000	160.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.08	0.92
	B	0.05	0.00	0.95
	C	0.69	0.31	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.28	8.07	0.39	A
B-A	0.03	11.14	0.03	B
C-A	-	-	-	-
C-B	0.23	6.10	0.30	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	120.46	119.54	0.00	639.99	0.188	0.23	6.906	A
B-A	6.02	5.96	0.00	384.71	0.016	0.02	9.504	A
C-A	269.52	269.52	0.00	-	-	-	-	-
C-B	120.46	119.74	0.00	786.73	0.153	0.18	5.392	A
A-B	12.05	12.05	0.00	-	-	-	-	-
A-C	132.50	132.50	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	143.84	143.59	0.00	632.67	0.227	0.29	7.357	A
B-A	7.19	7.17	0.00	362.91	0.020	0.02	10.119	B
C-A	321.83	321.83	0.00	-	-	-	-	-
C-B	143.84	143.65	0.00	778.15	0.185	0.23	5.672	A
A-B	14.38	14.38	0.00	-	-	-	-	-
A-C	158.22	158.22	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	176.16	175.77	0.00	622.48	0.283	0.39	8.051	A
B-A	8.81	8.78	0.00	332.14	0.027	0.03	11.133	B
C-A	394.17	394.17	0.00	-	-	-	-	-
C-B	176.16	175.88	0.00	766.28	0.230	0.30	6.095	A
A-B	17.62	17.62	0.00	-	-	-	-	-
A-C	193.78	193.78	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	176.16	176.15	0.00	622.46	0.283	0.39	8.066	A
B-A	8.81	8.81	0.00	332.00	0.027	0.03	11.138	B
C-A	394.17	394.17	0.00	-	-	-	-	-
C-B	176.16	176.16	0.00	766.28	0.230	0.30	6.099	A
A-B	17.62	17.62	0.00	-	-	-	-	-
A-C	193.78	193.78	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	143.84	144.22	0.00	632.65	0.227	0.30	7.378	A
B-A	7.19	7.22	0.00	362.72	0.020	0.02	10.128	B
C-A	321.83	321.83	0.00	-	-	-	-	-
C-B	143.84	144.11	0.00	778.15	0.185	0.23	5.682	A
A-B	14.38	14.38	0.00	-	-	-	-	-
A-C	158.22	158.22	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	120.46	120.71	0.00	639.94	0.188	0.23	6.938	A
B-A	6.02	6.04	0.00	384.38	0.016	0.02	9.515	A
C-A	269.52	269.52	0.00	-	-	-	-	-
C-B	120.46	120.64	0.00	786.73	0.153	0.18	5.407	A
A-B	12.05	12.05	0.00	-	-	-	-	-
A-C	132.50	132.50	0.00	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, PM	2023 Base + Dev	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Pentir Access	T-Junction	Two-way	A,B,C	8.43	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	B4547 N		Major
B	B	Pentir Access		Minor
C	C	B4547 S		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.15		0.00	✓	3.63	250.00		

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	5.05	2.85	2.51	2.41	✓	1.00	50	31

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	495.261	0.086	0.217	0.136	0.309
1	B-C	673.885	0.098	0.248	-	-
1	C-B	830.937	0.306	0.306	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	403.00	100.000
B	ONE HOUR	✓	176.00	100.000
C	ONE HOUR	✓	429.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	8.000	395.000
	B	16.000	0.000	160.000
	C	269.000	160.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.02	0.98
	B	0.09	0.00	0.91
	C	0.63	0.37	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.32	9.47	0.46	A
B-A	0.06	12.92	0.06	B
C-A	-	-	-	-
C-B	0.25	6.93	0.34	A
A-B	-	-	-	-
A-C	-	-	-	-

Main Results for each time segment

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	120.46	119.45	0.00	594.48	0.203	0.25	7.563	A
B-A	12.05	11.91	0.00	362.73	0.033	0.03	10.262	B
C-A	202.52	202.52	0.00	-	-	-	-	-
C-B	120.46	119.68	0.00	738.14	0.163	0.19	5.813	A
A-B	6.02	6.02	0.00	-	-	-	-	-
A-C	297.38	297.38	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	143.84	143.53	0.00	578.61	0.249	0.33	8.268	A
B-A	14.38	14.34	0.00	335.27	0.043	0.04	11.216	B
C-A	241.83	241.83	0.00	-	-	-	-	-
C-B	143.84	143.62	0.00	720.13	0.200	0.25	6.244	A
A-B	7.19	7.19	0.00	-	-	-	-	-
A-C	355.10	355.10	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	176.16	175.64	0.00	556.36	0.317	0.46	9.442	A
B-A	17.62	17.54	0.00	296.32	0.059	0.06	12.910	B
C-A	296.17	296.17	0.00	-	-	-	-	-
C-B	176.16	175.81	0.00	695.23	0.253	0.34	6.926	A
A-B	8.81	8.81	0.00	-	-	-	-	-
A-C	434.90	434.90	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	176.16	176.15	0.00	556.31	0.317	0.46	9.469	A
B-A	17.62	17.61	0.00	296.15	0.059	0.06	12.924	B
C-A	296.17	296.17	0.00	-	-	-	-	-
C-B	176.16	176.16	0.00	695.23	0.253	0.34	6.934	A
A-B	8.81	8.81	0.00	-	-	-	-	-
A-C	434.90	434.90	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	143.84	144.34	0.00	578.54	0.249	0.33	8.300	A
B-A	14.38	14.45	0.00	335.03	0.043	0.05	11.231	B
C-A	241.83	241.83	0.00	-	-	-	-	-
C-B	143.84	144.18	0.00	720.13	0.200	0.25	6.256	A
A-B	7.19	7.19	0.00	-	-	-	-	-
A-C	355.10	355.10	0.00	-	-	-	-	-

Main results: (18:00-18:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-C	120.46	120.77	0.00	594.37	0.203	0.26	7.605	A
B-A	12.05	12.09	0.00	362.36	0.033	0.03	10.278	B
C-A	202.52	202.52	0.00	-	-	-	-	-
C-B	120.46	120.68	0.00	738.14	0.163	0.20	5.831	A
A-B	6.02	6.02	0.00	-	-	-	-	-
A-C	297.38	297.38	0.00	-	-	-	-	-

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: LLRJ1_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\LLR\Junction 1\2018 DF
Report generation date: 15/06/2018 08:24:16

» (Default Analysis Set) - 2029 Base, AM
» (Default Analysis Set) - 2029 Base, PM
» (Default Analysis Set) - 2029 Base + Dev, AM
» (Default Analysis Set) - 2029 Base + Dev, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2029 Base							
Arm Indus	0.89	5.26	0.47	A	2.09	8.81	0.68	A
Arm New D	0.07	4.66	0.07	A	0.13	6.28	0.11	A
Arm 5114S	2.93	6.64	0.75	A	0.77	2.99	0.44	A
Arm 5114N	1.03	9.22	0.51	A	0.69	5.38	0.41	A
	A1 - 2029 Base + Dev							
Arm Indus	1.13	5.95	0.53	A	2.81	10.91	0.74	B
Arm New D	0.08	4.94	0.07	A	0.14	6.78	0.12	A
Arm 5114S	4.71	9.74	0.83	A	1.07	3.49	0.52	A
Arm 5114N	1.33	11.96	0.57	B	0.79	6.21	0.44	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2029 Base, AM " model duration: 07:45 - 09:15
"D2 - 2029 Base, PM" model duration: 16:45 - 18:15
"D3 - 2029 Base + Dev, AM" model duration: 07:45 - 09:15
"D4 - 2029 Base + Dev, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.6.541 at 15/06/2018 08:24:12

File summary

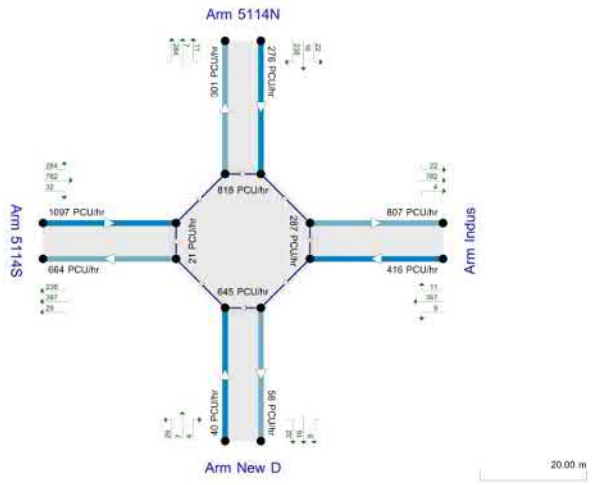
Title	(untitled)
Location	
Site Number	
Date	13/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2029 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 5114S - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2029 Base, AM	2029 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	LLR J1	Roundabout	Indus,New D,5114S,5114N			6.67	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
Indus	Indus	Industrial Estate Rd	
New D	New D	New Dev Access	
5114S	5114S	A5114 S	
5114N	5114N	A5114 N	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
Indus	0.00	99999.00
New D	0.00	99999.00
5114S	0.00	99999.00
5114N	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Indus	3.60	6.50	9.10	28.00	54.00	33.00	
New D	3.30	5.60	4.90	29.00	54.00	21.00	
5114S	3.50	8.90	31.90	69.00	54.00	33.00	
5114N	3.50	6.00	13.00	10.00	54.00	37.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Indus		(calculated)	(calculated)	0.560	1531.282
New D		(calculated)	(calculated)	0.536	1337.759
5114S		(calculated)	(calculated)	0.683	2173.395
5114N		(calculated)	(calculated)	0.517	1417.490

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Indus	ONE HOUR	✓	555.00	100.000
New D	ONE HOUR	✓	52.70	100.000
5114S	ONE HOUR	✓	1463.00	100.000
5114N	ONE HOUR	✓	369.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		Indus	**New D**	**5114S**	**5114N**
From	**Indus**	0.000	12.000	529.000	14.000
	New D	5.000	0.000	38.700	9.000
	5114S	1042.000	43.000	0.000	378.000
	5114N	29.000	22.000	318.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		Indus	**New D**	**5114S**	**5114N**
From	**Indus**	0.00	0.02	0.95	0.03
	New D	0.09	0.00	0.73	0.17
	5114S	0.71	0.03	0.00	0.26
	5114N	0.08	0.06	0.86	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		Indus	**New D**	**5114S**	**5114N**
From	**Indus**	1.000	1.000	1.000	1.000
	New D	1.000	1.000	1.000	1.000
	5114S	1.000	1.000	1.000	1.000
	5114N	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		Indus	**New D**	**5114S**	**5114N**
From	**Indus**	0.0	0.0	0.0	0.0
	New D	0.0	0.0	0.0	0.0
	5114S	0.0	0.0	0.0	0.0
	5114N	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Indus	0.47	5.26	0.89	A
New D	0.07	4.66	0.07	A
5114S	0.75	6.64	2.93	A
5114N	0.51	9.22	1.03	A

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Indus	417.83	416.09	286.80	0.00	1370.80	0.305	0.44	3.764	A
New D	39.68	39.51	645.17	0.00	991.96	0.040	0.04	3.779	A
5114S	1101.42	1097.29	20.99	0.00	2159.06	0.510	1.03	3.379	A
5114N	277.80	276.26	817.53	0.00	994.52	0.279	0.38	5.002	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Indus	498.93	498.32	343.58	0.00	1339.03	0.373	0.59	4.279	A
New D	47.38	47.33	772.79	0.00	923.56	0.051	0.05	4.108	A
5114S	1315.21	1313.16	25.14	0.00	2156.22	0.610	1.55	4.260	A
5114N	331.72	331.00	978.36	0.00	911.30	0.364	0.57	6.196	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Indus	611.07	609.90	419.88	0.00	1296.33	0.471	0.88	5.236	A
New D	58.02	57.94	945.29	0.00	831.10	0.070	0.07	4.656	A
5114S	1610.79	1605.40	30.78	0.00	2152.37	0.748	2.89	6.516	A
5114N	406.28	404.48	1196.11	0.00	798.65	0.509	1.01	9.092	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Indus	611.07	611.04	421.63	0.00	1295.35	0.472	0.89	5.260	A
New D	58.02	58.02	947.91	0.00	829.70	0.070	0.07	4.664	A
5114S	1610.79	1610.64	30.83	0.00	2152.34	0.748	2.93	6.641	A
5114N	406.28	406.22	1200.00	0.00	796.64	0.510	1.03	9.218	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Indus	498.93	500.09	346.12	0.00	1337.61	0.373	0.60	4.305	A
New D	47.38	47.46	776.69	0.00	921.47	0.051	0.05	4.120	A
5114S	1315.21	1320.61	25.22	0.00	2156.17	0.610	1.58	4.337	A
5114N	331.72	333.51	983.90	0.00	908.44	0.365	0.58	6.282	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Indus	417.83	418.46	289.10	0.00	1369.51	0.305	0.44	3.789	A
New D	39.68	39.73	649.48	0.00	989.65	0.040	0.04	3.791	A
5114S	1101.42	1103.56	21.11	0.00	2158.98	0.510	1.05	3.419	A
5114N	277.80	278.56	822.20	0.00	992.10	0.280	0.39	5.052	A

(Default Analysis Set) - 2029 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 5114S - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2029 Base, PM	2029 Base	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	LLR J1	Roundabout	Indus,New D,5114S,5114N			5.72	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
Indus	Indus	Industrial Estate Rd	
New D	New D	New Dev Access	
5114S	5114S	A5114 S	
5114N	5114N	A5114 N	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
Indus	0.00	99999.00
New D	0.00	99999.00
5114S	0.00	99999.00
5114N	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Indus	3.60	6.50	9.10	28.00	54.00	33.00	
New D	3.30	5.60	4.90	29.00	54.00	21.00	
5114S	3.50	8.90	31.90	69.00	54.00	33.00	
5114N	3.50	6.00	13.00	10.00	54.00	37.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Indus		(calculated)	(calculated)	0.560	1531.282
New D		(calculated)	(calculated)	0.536	1337.759
5114S		(calculated)	(calculated)	0.683	2173.395
5114N		(calculated)	(calculated)	0.517	1417.490

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Indus	ONE HOUR	✓	786.00	100.000
New D	ONE HOUR	✓	67.00	100.000
5114S	ONE HOUR	✓	847.00	100.000
5114N	ONE HOUR	✓	419.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		Indus	New D	5114S	5114N
From	Indus	0.000	3.000	756.000	27.000
	New D	10.000	0.000	47.000	10.000
	5114S	469.000	24.000	0.000	354.000
	5114N	25.000	6.000	388.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		Indus	New D	5114S	5114N
From	Indus	0.00	0.00	0.96	0.03
	New D	0.15	0.00	0.70	0.15
	5114S	0.55	0.03	0.00	0.42
	5114N	0.06	0.01	0.93	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		Indus	New D	5114S	5114N
From	Indus	1.000	1.000	1.000	1.000
	New D	1.000	1.000	1.000	1.000
	5114S	1.000	1.000	1.000	1.000
	5114N	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		Indus	New D	5114S	5114N
From	Indus	0.0	0.0	0.0	0.0
	New D	0.0	0.0	0.0	0.0
	5114S	0.0	0.0	0.0	0.0
	5114N	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Indus	0.68	8.81	2.09	A
New D	0.11	6.28	0.13	A
5114S	0.44	2.99	0.77	A
5114N	0.41	5.38	0.69	A

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Indus	591.74	588.67	313.34	0.00	1355.95	0.436	0.77	4.673	A
New D	50.44	50.20	877.25	0.00	867.57	0.058	0.06	4.403	A
5114S	637.67	635.99	35.21	0.00	2149.35	0.297	0.42	2.377	A
5114N	315.45	314.06	377.67	0.00	1222.09	0.258	0.35	3.959	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Indus	706.60	705.13	375.32	0.00	1321.27	0.535	1.13	5.828	A
New D	60.23	60.14	1050.81	0.00	774.55	0.078	0.08	5.039	A
5114S	761.44	760.92	42.17	0.00	2144.59	0.355	0.55	2.602	A
5114N	376.67	376.20	451.88	0.00	1183.70	0.318	0.46	4.455	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Indus	865.40	861.71	459.38	0.00	1274.23	0.679	2.06	8.648	A
New D	73.77	73.59	1284.81	0.00	649.13	0.114	0.13	6.253	A
5114S	932.56	931.68	51.57	0.00	2138.17	0.436	0.77	2.983	A
5114N	461.33	460.45	553.27	0.00	1131.24	0.408	0.68	5.360	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Indus	865.40	865.28	460.21	0.00	1273.76	0.679	2.09	8.806	A
New D	73.77	73.76	1289.16	0.00	646.80	0.114	0.13	6.281	A
5114S	932.56	932.56	51.74	0.00	2138.05	0.436	0.77	2.985	A
5114N	461.33	461.31	553.81	0.00	1130.96	0.408	0.69	5.375	A

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Indus	706.60	710.28	376.61	0.00	1320.55	0.535	1.17	5.935	A
New D	60.23	60.40	1057.17	0.00	771.14	0.078	0.09	5.065	A
5114S	761.44	762.31	42.43	0.00	2144.41	0.355	0.55	2.605	A
5114N	376.67	377.53	452.72	0.00	1183.26	0.318	0.47	4.474	A

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Indus	591.74	593.28	315.16	0.00	1354.93	0.437	0.78	4.735	A
New D	50.44	50.53	883.57	0.00	864.19	0.058	0.06	4.426	A
5114S	637.67	638.18	35.46	0.00	2149.17	0.297	0.42	2.384	A
5114N	315.45	315.93	379.00	0.00	1221.40	0.258	0.35	3.977	A

(Default Analysis Set) - 2029 Base + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 5114S - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2029 Base + Dev, AM	2029 Base + Dev	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	LLR J1	Roundabout	Indus,New D,5114S,5114N			9.06	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
Indus	Indus	Industrial Estate Rd	
New D	New D	New Dev Access	
5114S	5114S	A5114 S	
5114N	5114N	A5114 N	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
Indus	0.00	99999.00
New D	0.00	99999.00
5114S	0.00	99999.00
5114N	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Indus	3.60	6.50	9.10	28.00	54.00	33.00	
New D	3.30	5.60	4.90	29.00	54.00	21.00	
5114S	3.50	8.90	31.90	69.00	54.00	33.00	
5114N	3.50	6.00	13.00	10.00	54.00	37.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Indus		(calculated)	(calculated)	0.560	1531.282
New D		(calculated)	(calculated)	0.536	1337.759
5114S		(calculated)	(calculated)	0.683	2173.395
5114N		(calculated)	(calculated)	0.517	1417.490

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Indus	ONE HOUR	✓	627.00	100.000
New D	ONE HOUR	✓	52.70	100.000
5114S	ONE HOUR	✓	1621.00	100.000
5114N	ONE HOUR	✓	369.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		Indus	New D	5114S	5114N
From	Indus	0.000	12.000	601.000	14.000
	New D	5.000	0.000	38.700	9.000
	5114S	1200.000	43.000	0.000	378.000
	5114N	29.000	22.000	318.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		Indus	New D	5114S	5114N
From	Indus	0.00	0.02	0.96	0.02
	New D	0.09	0.00	0.73	0.17
	5114S	0.74	0.03	0.00	0.23
	5114N	0.08	0.06	0.86	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		Indus	New D	5114S	5114N
From	Indus	1.000	1.000	1.000	1.000
	New D	1.000	1.000	1.000	1.000
	5114S	1.000	1.000	1.000	1.000
	5114N	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		Indus	New D	5114S	5114N
From	Indus	0.0	0.0	0.0	0.0
	New D	0.0	0.0	0.0	0.0
	5114S	0.0	0.0	0.0	0.0
	5114N	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Indus	0.53	5.95	1.13	A
New D	0.07	4.94	0.08	A
5114S	0.83	9.74	4.71	A
5114N	0.57	11.96	1.33	B

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Indus	472.04	469.95	286.66	0.00	1370.88	0.344	0.52	3.987	A
New D	39.68	39.50	698.92	0.00	963.15	0.041	0.04	3.898	A
5114S	1220.37	1215.22	20.99	0.00	2159.06	0.565	1.29	3.795	A
5114N	277.80	276.12	935.59	0.00	933.43	0.298	0.42	5.464	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Indus	563.66	562.86	343.39	0.00	1339.13	0.421	0.72	4.632	A
New D	47.38	47.32	837.19	0.00	889.04	0.053	0.06	4.276	A
5114S	1457.25	1454.20	25.14	0.00	2156.22	0.676	2.05	5.105	A
5114N	331.72	330.82	1119.58	0.00	838.24	0.396	0.65	7.081	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Indus	690.34	688.73	419.03	0.00	1296.81	0.532	1.12	5.905	A
New D	58.02	57.93	1023.43	0.00	789.22	0.074	0.08	4.922	A
5114S	1784.75	1774.62	30.77	0.00	2152.38	0.829	4.58	9.287	A
5114N	406.28	403.68	1366.29	0.00	710.60	0.572	1.30	11.632	B

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Indus	690.34	690.30	421.56	0.00	1295.39	0.533	1.13	5.949	A
New D	58.02	58.02	1027.11	0.00	787.25	0.074	0.08	4.936	A
5114S	1784.75	1784.24	30.83	0.00	2152.34	0.829	4.71	9.743	A
5114N	406.28	406.15	1373.68	0.00	706.77	0.575	1.33	11.963	B

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Indus	563.66	565.25	347.01	0.00	1337.11	0.422	0.74	4.675	A
New D	47.38	47.47	842.57	0.00	886.16	0.053	0.06	4.294	A
5114S	1457.25	1467.60	25.23	0.00	2156.16	0.676	2.12	5.304	A
5114N	331.72	334.35	1129.88	0.00	832.91	0.398	0.67	7.259	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Indus	472.04	472.86	289.32	0.00	1369.39	0.345	0.53	4.018	A
New D	39.68	39.73	704.05	0.00	960.40	0.041	0.04	3.911	A
5114S	1220.37	1223.61	21.11	0.00	2158.97	0.565	1.31	3.863	A
5114N	277.80	278.77	942.04	0.00	930.09	0.299	0.43	5.536	A

(Default Analysis Set) - 2029 Base + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 5114S - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2029 Base + Dev, PM	2029 Base + Dev	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	LLR J1	Roundabout	Indus,New D,5114S,5114N			6.78	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
Indus	Indus	Industrial Estate Rd	
New D	New D	New Dev Access	
5114S	5114S	A5114 S	
5114N	5114N	A5114 N	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
Indus	0.00	99999.00
New D	0.00	99999.00
5114S	0.00	99999.00
5114N	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
Indus	3.60	6.50	9.10	28.00	54.00	33.00	
New D	3.30	5.60	4.90	29.00	54.00	21.00	
5114S	3.50	8.90	31.90	69.00	54.00	33.00	
5114N	3.50	6.00	13.00	10.00	54.00	37.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
Indus		(calculated)	(calculated)	0.560	1531.282
New D		(calculated)	(calculated)	0.536	1337.759
5114S		(calculated)	(calculated)	0.683	2173.395
5114N		(calculated)	(calculated)	0.517	1417.490

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
Indus	ONE HOUR	✓	858.00	100.000
New D	ONE HOUR	✓	67.00	100.000
5114S	ONE HOUR	✓	1005.00	100.000
5114N	ONE HOUR	✓	419.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		Indus	New D	5114S	5114N
From	Indus	0.000	3.000	828.000	27.000
	New D	10.000	0.000	47.000	10.000
	5114S	627.000	24.000	0.000	354.000
	5114N	25.000	6.000	388.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		Indus	New D	5114S	5114N
From	Indus	0.00	0.00	0.97	0.03
	New D	0.15	0.00	0.70	0.15
	5114S	0.62	0.02	0.00	0.35
	5114N	0.06	0.01	0.93	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		Indus	New D	5114S	5114N
From	Indus	1.000	1.000	1.000	1.000
	New D	1.000	1.000	1.000	1.000
	5114S	1.000	1.000	1.000	1.000
	5114N	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		Indus	New D	5114S	5114N
From	Indus	0.0	0.0	0.0	0.0
	New D	0.0	0.0	0.0	0.0
	5114S	0.0	0.0	0.0	0.0
	5114N	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
Indus	0.74	10.91	2.81	B
New D	0.12	6.78	0.14	A
5114S	0.52	3.49	1.07	A
5114N	0.44	6.21	0.79	A

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Indus	645.95	642.35	313.25	0.00	1356.00	0.476	0.90	5.020	A
New D	50.44	50.19	930.83	0.00	838.85	0.060	0.06	4.563	A
5114S	756.62	754.45	35.19	0.00	2149.35	0.352	0.54	2.578	A
5114N	315.45	313.96	496.20	0.00	1160.77	0.272	0.37	4.245	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Indus	771.32	769.41	375.23	0.00	1321.32	0.584	1.38	6.501	A
New D	60.23	60.13	1115.01	0.00	740.14	0.081	0.09	5.294	A
5114S	903.47	902.74	42.16	0.00	2144.59	0.421	0.72	2.897	A
5114N	376.67	376.12	593.74	0.00	1110.30	0.339	0.51	4.900	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Indus	944.68	939.22	459.15	0.00	1274.36	0.741	2.74	10.571	B
New D	73.77	73.57	1362.10	0.00	607.70	0.121	0.14	6.739	A
5114S	1106.53	1105.16	51.52	0.00	2138.20	0.518	1.06	3.480	A
5114N	461.33	460.22	726.86	0.00	1041.42	0.443	0.79	6.183	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Indus	944.68	944.43	460.21	0.00	1273.77	0.742	2.81	10.908	B
New D	73.77	73.76	1368.31	0.00	604.38	0.122	0.14	6.783	A
5114S	1106.53	1106.51	51.74	0.00	2138.05	0.518	1.07	3.489	A
5114N	461.33	461.31	727.76	0.00	1040.96	0.443	0.79	6.210	A

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Indus	771.32	776.83	376.83	0.00	1320.42	0.584	1.43	6.689	A
New D	60.23	60.43	1123.93	0.00	735.36	0.082	0.09	5.336	A
5114S	903.47	904.82	42.48	0.00	2144.38	0.421	0.73	2.906	A
5114N	376.67	377.76	595.13	0.00	1109.58	0.339	0.52	4.926	A

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
Indus	645.95	647.98	315.24	0.00	1354.88	0.477	0.92	5.108	A
New D	50.44	50.54	938.35	0.00	834.82	0.060	0.06	4.592	A
5114S	756.62	757.36	35.48	0.00	2149.16	0.352	0.55	2.587	A
5114N	315.45	316.01	498.13	0.00	1159.77	0.272	0.38	4.269	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: LLRJ2_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\LLR\Junction 2\2018 DF
Report generation date: 15/06/2018 08:31:21

» (Default Analysis Set) - Base 2029, AM
» (Default Analysis Set) - Base 2029, PM
» (Default Analysis Set) - Base + Dev 2029, AM
» (Default Analysis Set) - Base + Dev 2029, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - Base + Dev 2029							
Arm LLR	0.77	5.04	0.43	A	1.01	6.35	0.50	A
Arm A5114	4.80	12.14	0.83	B	0.71	3.51	0.42	A
Arm IndN	0.26	3.75	0.21	A	0.49	3.71	0.33	A
	A1 - Base 2029							
Arm LLR	0.42	4.05	0.30	A	0.54	4.86	0.35	A
Arm A5114	2.72	7.68	0.73	A	0.46	3.00	0.32	A
Arm IndN	0.23	3.40	0.19	A	0.44	3.37	0.31	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - Base 2029, AM " model duration: 07:45 - 09:15
"D2 - Base 2029, PM" model duration: 16:45 - 18:15
"D3 - Base + Dev 2029, AM" model duration: 07:45 - 09:15
"D4 - Base + Dev 2029, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.6.541 at 15/06/2018 08:31:17

File summary

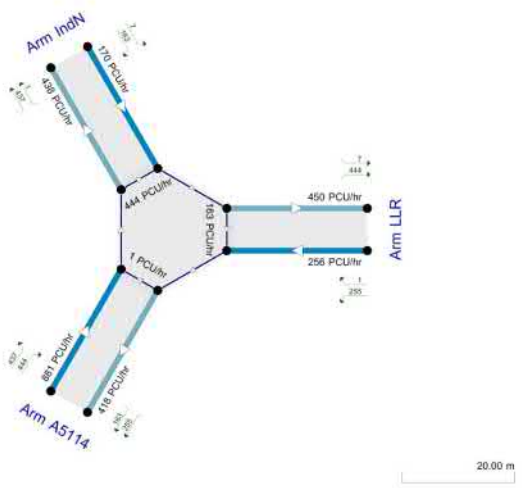
Title	(untitled)
Location	
Site Number	
Date	14/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - Base 2029, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Base 2029, AM	Base 2029	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	Junction 2	Roundabout	LLR,A5114,IndN			6.42	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
LLR	LLR	Link Rd	
A5114	A5114	Link to A5114	
IndN	IndN	Ind Est Rd N	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
LLR	0.00	99999.00
A5114	0.00	99999.00
IndN	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
LLR	3.60	5.00	4.30	30.00	61.00	15.00	
A5114	4.20	7.60	9.00	39.00	61.00	33.00	
IndN	3.00	7.30	14.70	44.00	61.00	21.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
LLR		(calculated)	(calculated)	0.516	1387.308
A5114		(calculated)	(calculated)	0.566	1762.314
IndN		(calculated)	(calculated)	0.562	1673.567

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
LLR	ONE HOUR	✓	341.00	100.000
A5114	ONE HOUR	✓	1175.00	100.000
IndN	ONE HOUR	✓	226.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	**LLR**	256.72	256.72		
07:45-08:00	**A5114**	884.60	884.60		
07:45-08:00	**IndN**	170.14	170.14		
08:00-08:15	**LLR**	306.55	306.55		
08:00-08:15	**A5114**	1056.30	1056.30		
08:00-08:15	**IndN**	203.17	203.17		
08:15-08:30	**LLR**	375.45	375.45		
08:15-08:30	**A5114**	1293.70	1293.70		
08:15-08:30	**IndN**	248.83	248.83		
08:30-08:45	**LLR**	375.45	375.45		
08:30-08:45	**A5114**	1293.70	1293.70		
08:30-08:45	**IndN**	248.83	248.83		
08:45-09:00	**LLR**	306.55	306.55		
08:45-09:00	**A5114**	1056.30	1056.30		
08:45-09:00	**IndN**	203.17	203.17		
09:00-09:15	**LLR**	256.72	256.72		
09:00-09:15	**A5114**	884.60	884.60		
09:00-09:15	**IndN**	170.14	170.14		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		LLR	**A5114**	**IndN**
From	**LLR**	0.000	340.000	1.000
	A5114	592.000	0.000	583.000
	IndN	9.000	217.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		LLR	**A5114**	**IndN**
From	**LLR**	0.00	1.00	0.00
	A5114	0.50	0.00	0.50
	IndN	0.04	0.96	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		LLR	**A5114**	**IndN**
From	**LLR**	1.000	1.000	1.000
	A5114	1.000	1.000	1.000
	IndN	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		LLR	**A5114**	**IndN**
From	**LLR**	0.0	0.0	0.0
	A5114	0.0	0.0	0.0
	IndN	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
LLR	0.30	4.05	0.42	A
A5114	0.73	7.68	2.72	A
IndN	0.19	3.40	0.23	A

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LLR	256.72	255.75	162.85	0.00	1303.34	0.197	0.24	3.433	A
A5114	884.60	880.60	0.75	0.00	1761.89	0.502	1.00	4.067	A
IndN	170.14	169.60	443.67	0.00	1424.22	0.119	0.14	2.867	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LLR	306.55	306.28	194.93	0.00	1286.80	0.238	0.31	3.671	A
A5114	1056.30	1054.39	0.90	0.00	1761.81	0.600	1.48	5.077	A
IndN	203.17	203.02	531.23	0.00	1375.01	0.148	0.17	3.071	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LLR	375.45	375.01	238.69	0.00	1264.24	0.297	0.42	4.046	A
A5114	1293.70	1288.88	1.10	0.00	1761.69	0.734	2.68	7.537	A
IndN	248.83	248.59	649.38	0.00	1308.62	0.190	0.23	3.396	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LLR	375.45	375.44	238.92	0.00	1264.12	0.297	0.42	4.050	A
A5114	1293.70	1293.54	1.10	0.00	1761.69	0.734	2.72	7.683	A
IndN	248.83	248.83	651.72	0.00	1307.30	0.190	0.23	3.400	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LLR	306.55	306.98	195.31	0.00	1286.60	0.238	0.31	3.675	A
A5114	1056.30	1061.12	0.90	0.00	1761.80	0.600	1.52	5.174	A
IndN	203.17	203.41	534.62	0.00	1373.11	0.148	0.17	3.080	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LLR	256.72	256.99	163.51	0.00	1303.00	0.197	0.25	3.441	A
A5114	884.60	886.60	0.75	0.00	1761.89	0.502	1.02	4.122	A
IndN	170.14	170.30	446.70	0.00	1422.52	0.120	0.14	2.874	A

(Default Analysis Set) - Base 2029, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Base 2029, PM	Base 2029	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	Junction 2	Roundabout	LLR,A5114,IndN			3.64	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
LLR	LLR	Link Rd	
A5114	A5114	Link to A5114	
IndN	IndN	Ind Est Rd N	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
LLR	0.00	99999.00
A5114	0.00	99999.00
IndN	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
LLR	3.60	5.00	4.30	30.00	61.00	15.00	
A5114	4.20	7.60	9.00	39.00	61.00	33.00	
IndN	3.00	7.30	14.70	44.00	61.00	21.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
LLR		(calculated)	(calculated)	0.516	1387.308
A5114		(calculated)	(calculated)	0.566	1762.314
IndN		(calculated)	(calculated)	0.562	1673.567

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
LLR	ONE HOUR	✓	366.00	100.000
A5114	ONE HOUR	✓	506.00	100.000
IndN	ONE HOUR	✓	430.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	**LLR**	275.54	275.54		
16:45-17:00	**A5114**	380.94	380.94		
16:45-17:00	**IndN**	323.73	323.73		
17:00-17:15	**LLR**	329.03	329.03		
17:00-17:15	**A5114**	454.88	454.88		
17:00-17:15	**IndN**	386.56	386.56		
17:15-17:30	**LLR**	402.97	402.97		
17:15-17:30	**A5114**	557.12	557.12		
17:15-17:30	**IndN**	473.44	473.44		
17:30-17:45	**LLR**	402.97	402.97		
17:30-17:45	**A5114**	557.12	557.12		
17:30-17:45	**IndN**	473.44	473.44		
17:45-18:00	**LLR**	329.03	329.03		
17:45-18:00	**A5114**	454.88	454.88		
17:45-18:00	**IndN**	386.56	386.56		
18:00-18:15	**LLR**	275.54	275.54		
18:00-18:15	**A5114**	380.94	380.94		
18:00-18:15	**IndN**	323.73	323.73		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		LLR	**A5114**	**IndN**
From	**LLR**	0.000	358.000	8.000
	A5114	214.000	0.000	292.000
	IndN	1.000	429.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		LLR	**A5114**	**IndN**
From	**LLR**	0.00	0.98	0.02
	A5114	0.42	0.00	0.58
	IndN	0.00	1.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		LLR	**A5114**	**IndN**
From	**LLR**	1.000	1.000	1.000
	A5114	1.000	1.000	1.000
	IndN	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		LLR	**A5114**	**IndN**
From	**LLR**	0.0	0.0	0.0
	A5114	0.0	0.0	0.0
	IndN	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
LLR	0.35	4.86	0.54	A
A5114	0.32	3.00	0.46	A
IndN	0.31	3.37	0.44	A

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LLR	275.54	274.38	321.95	0.00	1221.31	0.226	0.29	3.796	A
A5114	380.94	379.84	6.00	0.00	1758.92	0.217	0.28	2.607	A
IndN	323.73	322.70	160.64	0.00	1583.28	0.204	0.26	2.853	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LLR	329.03	328.66	385.38	0.00	1188.60	0.277	0.38	4.184	A
A5114	454.88	454.59	7.18	0.00	1758.25	0.259	0.35	2.761	A
IndN	386.56	386.28	192.26	0.00	1565.52	0.247	0.33	3.052	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LLR	402.97	402.34	471.88	0.00	1144.00	0.352	0.54	4.850	A
A5114	557.12	556.66	8.79	0.00	1757.34	0.317	0.46	2.998	A
IndN	473.44	472.98	235.42	0.00	1541.26	0.307	0.44	3.367	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LLR	402.97	402.96	472.33	0.00	1143.77	0.352	0.54	4.859	A
A5114	557.12	557.11	8.81	0.00	1757.33	0.317	0.46	2.998	A
IndN	473.44	473.43	235.62	0.00	1541.15	0.307	0.44	3.370	A

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LLR	329.03	329.65	386.11	0.00	1188.22	0.277	0.39	4.195	A
A5114	454.88	455.33	7.21	0.00	1758.24	0.259	0.35	2.765	A
IndN	386.56	387.01	192.57	0.00	1565.34	0.247	0.33	3.055	A

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LLR	275.54	275.91	323.26	0.00	1220.63	0.226	0.29	3.814	A
A5114	380.94	381.24	6.03	0.00	1758.90	0.217	0.28	2.613	A
IndN	323.73	324.01	161.23	0.00	1582.95	0.205	0.26	2.859	A

(Default Analysis Set) - Base + Dev 2029, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Base + Dev 2029, AM	Base + Dev 2029	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	Junction 2	Roundabout	LLR,A5114,IndN			9.50	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
LLR	LLR	Link Rd	
A5114	A5114	Link to A5114	
IndN	IndN	Ind Est Rd N	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
LLR	0.00	99999.00
A5114	0.00	99999.00
IndN	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
LLR	3.60	5.00	4.30	30.00	61.00	15.00	
A5114	4.20	7.60	9.00	39.00	61.00	33.00	
IndN	3.00	7.30	14.70	44.00	61.00	21.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
LLR		(calculated)	(calculated)	0.516	1387.308
A5114		(calculated)	(calculated)	0.566	1762.314
IndN		(calculated)	(calculated)	0.562	1673.567

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
LLR	ONE HOUR	✓	499.00	100.000
A5114	ONE HOUR	✓	1333.00	100.000
IndN	ONE HOUR	✓	227.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	**LLR**	375.67	375.67		
07:45-08:00	**A5114**	1003.55	1003.55		
07:45-08:00	**IndN**	170.90	170.90		
08:00-08:15	**LLR**	448.59	448.59		
08:00-08:15	**A5114**	1198.34	1198.34		
08:00-08:15	**IndN**	204.07	204.07		
08:15-08:30	**LLR**	549.41	549.41		
08:15-08:30	**A5114**	1467.66	1467.66		
08:15-08:30	**IndN**	249.93	249.93		
08:30-08:45	**LLR**	549.41	549.41		
08:30-08:45	**A5114**	1467.66	1467.66		
08:30-08:45	**IndN**	249.93	249.93		
08:45-09:00	**LLR**	448.59	448.59		
08:45-09:00	**A5114**	1198.34	1198.34		
08:45-09:00	**IndN**	204.07	204.07		
09:00-09:15	**LLR**	375.67	375.67		
09:00-09:15	**A5114**	1003.55	1003.55		
09:00-09:15	**IndN**	170.90	170.90		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		LLR	**A5114**	**IndN**
From	**LLR**	0.000	498.000	1.000
	A5114	750.000	0.000	583.000
	IndN	9.000	218.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		LLR	**A5114**	**IndN**
From	**LLR**	0.00	1.00	0.00
	A5114	0.56	0.00	0.44
	IndN	0.04	0.96	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		LLR	**A5114**	**IndN**
From	**LLR**	1.000	1.000	1.000
	A5114	1.000	1.000	1.000
	IndN	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		LLR	**A5114**	**IndN**
From	**LLR**	0.0	0.0	0.0
	A5114	0.0	0.0	0.0
	IndN	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
LLR	0.43	5.04	0.77	A
A5114	0.83	12.14	4.80	B
IndN	0.21	3.75	0.26	A

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LLR	375.67	374.06	163.57	0.00	1302.97	0.288	0.40	3.869	A
A5114	1003.55	998.32	0.75	0.00	1761.89	0.570	1.31	4.683	A
IndN	170.90	170.32	561.70	0.00	1357.89	0.126	0.14	3.029	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LLR	448.59	448.07	195.81	0.00	1286.34	0.349	0.53	4.291	A
A5114	1198.34	1195.24	0.90	0.00	1761.81	0.680	2.08	6.318	A
IndN	204.07	203.90	672.49	0.00	1295.63	0.158	0.19	3.297	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LLR	549.41	548.49	239.75	0.00	1263.69	0.435	0.76	5.027	A
A5114	1467.66	1457.41	1.10	0.00	1761.69	0.833	4.65	11.456	B
IndN	249.93	249.64	820.00	0.00	1212.73	0.206	0.26	3.738	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LLR	549.41	549.39	240.02	0.00	1263.55	0.435	0.77	5.040	A
A5114	1467.66	1467.02	1.10	0.00	1761.69	0.833	4.80	12.144	B
IndN	249.93	249.93	825.41	0.00	1209.69	0.207	0.26	3.749	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LLR	448.59	449.50	196.25	0.00	1286.12	0.349	0.54	4.309	A
A5114	1198.34	1208.87	0.90	0.00	1761.80	0.680	2.17	6.631	A
IndN	204.07	204.35	680.16	0.00	1291.32	0.158	0.19	3.312	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LLR	375.67	376.20	164.29	0.00	1302.60	0.288	0.41	3.889	A
A5114	1003.55	1006.89	0.75	0.00	1761.89	0.570	1.34	4.788	A
IndN	170.90	171.07	566.52	0.00	1355.19	0.126	0.14	3.040	A

(Default Analysis Set) - Base + Dev 2029, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Base + Dev 2029, PM	Base + Dev 2029	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	Junction 2	Roundabout	LLR,A5114,IndN			4.48	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
LLR	LLR	Link Rd	
A5114	A5114	Link to A5114	
IndN	IndN	Ind Est Rd N	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
LLR	0.00	99999.00
A5114	0.00	99999.00
IndN	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
LLR	3.60	5.00	4.30	30.00	61.00	15.00	
A5114	4.20	7.60	9.00	39.00	61.00	33.00	
IndN	3.00	7.30	14.70	44.00	61.00	21.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
LLR		(calculated)	(calculated)	0.516	1387.308
A5114		(calculated)	(calculated)	0.566	1762.314
IndN		(calculated)	(calculated)	0.562	1673.567

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
LLR	ONE HOUR	✓	524.00	100.000
A5114	ONE HOUR	✓	664.00	100.000
IndN	ONE HOUR	✓	430.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	**LLR**	394.49	394.49		
16:45-17:00	**A5114**	499.89	499.89		
16:45-17:00	**IndN**	323.73	323.73		
17:00-17:15	**LLR**	471.07	471.07		
17:00-17:15	**A5114**	596.92	596.92		
17:00-17:15	**IndN**	386.56	386.56		
17:15-17:30	**LLR**	576.93	576.93		
17:15-17:30	**A5114**	731.08	731.08		
17:15-17:30	**IndN**	473.44	473.44		
17:30-17:45	**LLR**	576.93	576.93		
17:30-17:45	**A5114**	731.08	731.08		
17:30-17:45	**IndN**	473.44	473.44		
17:45-18:00	**LLR**	471.07	471.07		
17:45-18:00	**A5114**	596.92	596.92		
17:45-18:00	**IndN**	386.56	386.56		
18:00-18:15	**LLR**	394.49	394.49		
18:00-18:15	**A5114**	499.89	499.89		
18:00-18:15	**IndN**	323.73	323.73		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		LLR	**A5114**	**IndN**
From	**LLR**	0.000	516.000	8.000
	A5114	372.000	0.000	292.000
	IndN	1.000	429.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		LLR	**A5114**	**IndN**
From	**LLR**	0.00	0.98	0.02
	A5114	0.56	0.00	0.44
	IndN	0.00	1.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		LLR	**A5114**	**IndN**
From	**LLR**	1.000	1.000	1.000
	A5114	1.000	1.000	1.000
	IndN	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		LLR	**A5114**	**IndN**
From	**LLR**	0.0	0.0	0.0
	A5114	0.0	0.0	0.0
	IndN	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
LLR	0.50	6.35	1.01	A
A5114	0.42	3.51	0.71	A
IndN	0.33	3.71	0.49	A

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LLR	394.49	392.60	321.90	0.00	1221.34	0.323	0.47	4.334	A
A5114	499.89	498.31	5.99	0.00	1758.92	0.284	0.40	2.852	A
IndN	323.73	322.65	279.18	0.00	1516.67	0.213	0.27	3.012	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LLR	471.07	470.36	385.34	0.00	1188.62	0.396	0.65	5.006	A
A5114	596.92	596.46	7.18	0.00	1758.25	0.340	0.51	3.096	A
IndN	386.56	386.24	334.16	0.00	1485.77	0.260	0.35	3.274	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LLR	576.93	575.52	471.80	0.00	1144.04	0.504	1.00	6.317	A
A5114	731.08	730.29	8.79	0.00	1757.34	0.416	0.71	3.504	A
IndN	473.44	472.90	409.14	0.00	1443.63	0.328	0.49	3.706	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LLR	576.93	576.91	472.33	0.00	1143.77	0.504	1.01	6.350	A
A5114	731.08	731.07	8.81	0.00	1757.33	0.416	0.71	3.507	A
IndN	473.44	473.43	409.57	0.00	1443.39	0.328	0.49	3.710	A

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LLR	471.07	472.46	386.19	0.00	1188.18	0.396	0.66	5.041	A
A5114	596.92	597.70	7.21	0.00	1758.23	0.340	0.52	3.103	A
IndN	386.56	387.09	334.85	0.00	1485.38	0.260	0.35	3.281	A

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LLR	394.49	395.22	323.30	0.00	1220.61	0.323	0.48	4.365	A
A5114	499.89	500.37	6.03	0.00	1758.90	0.284	0.40	2.863	A
IndN	323.73	324.05	280.33	0.00	1516.02	0.214	0.27	3.022	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: LLRJ3_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\LLR\Junction 3\2018 DF
Report generation date: 15/06/2018 08:35:31

« (Default Analysis Set) - 2029 Base, AM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Direct/Resultant Flows
» Turning Proportions
» Vehicle Mix
» Results

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2029 Base							
Arm LinkN	0.48	4.78	0.32	A	0.39	4.60	0.28	A
Arm LinkS	0.75	5.09	0.43	A	0.23	3.51	0.19	A
Arm Ind	0.12	4.57	0.11	A	0.16	4.28	0.14	A
	A1 - 2029 Base + Dev							
Arm LinkN	0.92	6.22	0.48	A	0.79	5.91	0.44	A
Arm LinkS	1.32	6.75	0.57	A	0.48	4.23	0.32	A
Arm Ind	0.14	5.16	0.12	A	0.18	4.79	0.15	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2029 Base, AM " model duration: 07:45 - 09:15
"D2 - 2029 Base, PM" model duration: 16:45 - 18:15
"D3 - 2029 Base + Dev, AM" model duration: 07:45 - 09:15
"D4 - 2029 Base + Dev, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.6.541 at 15/06/2018 08:35:29

File summary

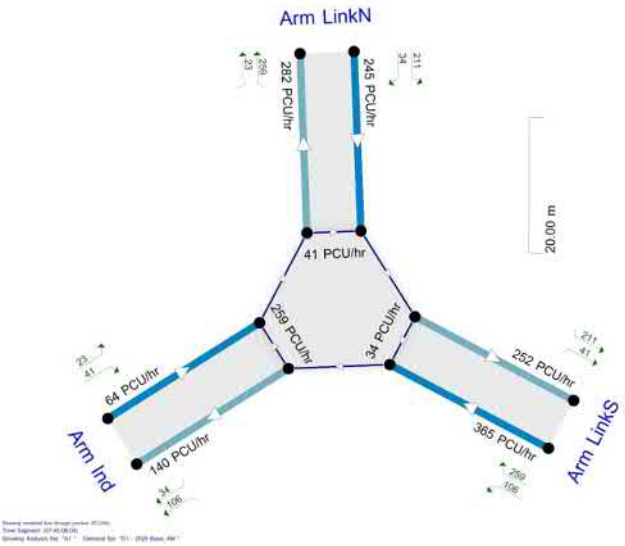
Title	(untitled)
Location	
Site Number	
Date	20/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2029 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2029 Base, AM	2029 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	LinkN,LinkS,Ind			4.93	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
LinkN	LinkN	Link Rd N	
LinkS	LinkS	Link Rd S	
Ind	Ind	Ind Est Rd	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
LinkN	0.00	99999.00
LinkS	0.00	99999.00
Ind	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
LinkN	3.50	4.50	1.30	22.00	32.00	32.00	
LinkS	3.60	5.30	2.10	39.00	32.00	28.00	
Ind	3.50	4.20	1.20	20.00	32.00	45.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
LinkN		(calculated)	(calculated)	0.542	1145.170
LinkS		(calculated)	(calculated)	0.578	1272.233
Ind		(calculated)	(calculated)	0.512	1075.438

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
LinkN	ONE HOUR	✓	326.90	100.000
LinkS	ONE HOUR	✓	486.90	100.000
Ind	ONE HOUR	✓	85.50	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	LinkN	246.11	246.11		
07:45-08:00	LinkS	366.56	366.56		
07:45-08:00	Ind	64.37	64.37		
08:00-08:15	LinkN	293.88	293.88		
08:00-08:15	LinkS	437.71	437.71		
08:00-08:15	Ind	76.86	76.86		
08:15-08:30	LinkN	359.92	359.92		
08:15-08:30	LinkS	536.09	536.09		
08:15-08:30	Ind	94.14	94.14		
08:30-08:45	LinkN	359.92	359.92		
08:30-08:45	LinkS	536.09	536.09		
08:30-08:45	Ind	94.14	94.14		
08:45-09:00	LinkN	293.88	293.88		
08:45-09:00	LinkS	437.71	437.71		
08:45-09:00	Ind	76.86	76.86		
09:00-09:15	LinkN	246.11	246.11		
09:00-09:15	LinkS	366.56	366.56		
09:00-09:15	Ind	64.37	64.37		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		LinkN	LinkS	Ind
From	LinkN	0.000	282.000	44.900
	LinkS	345.000	0.000	141.900
	Ind	30.600	54.900	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		LinkN	LinkS	Ind
From	LinkN	0.00	0.86	0.14
	LinkS	0.71	0.00	0.29
	Ind	0.36	0.64	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		LinkN	LinkS	Ind
From	LinkN	1.000	1.000	1.000
	LinkS	1.000	1.000	1.000
	Ind	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		LinkN	LinkS	Ind
From	LinkN	0.0	0.0	0.0
	LinkS	0.0	0.0	0.0
	Ind	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
LinkN	0.32	4.78	0.48	A
LinkS	0.43	5.09	0.75	A
Ind	0.11	4.57	0.12	A

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LinkN	246.11	244.99	41.14	0.00	1122.88	0.219	0.28	4.096	A
LinkS	366.56	364.92	33.65	0.00	1252.78	0.293	0.41	4.047	A
Ind	64.37	64.08	258.57	0.00	942.99	0.068	0.07	4.095	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LinkN	293.88	293.58	49.31	0.00	1118.46	0.263	0.35	4.363	A
LinkS	437.71	437.21	40.32	0.00	1248.93	0.350	0.54	4.432	A
Ind	76.86	76.79	309.79	0.00	916.75	0.084	0.09	4.285	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LinkN	359.92	359.44	60.37	0.00	1112.46	0.324	0.47	4.777	A
LinkS	536.09	535.23	49.37	0.00	1243.70	0.431	0.75	5.075	A
Ind	94.14	94.03	379.24	0.00	881.18	0.107	0.12	4.573	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LinkN	359.92	359.92	60.45	0.00	1112.42	0.324	0.48	4.783	A
LinkS	536.09	536.07	49.43	0.00	1243.66	0.431	0.75	5.087	A
Ind	94.14	94.14	379.84	0.00	880.87	0.107	0.12	4.575	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LinkN	293.88	294.35	49.42	0.00	1118.39	0.263	0.36	4.370	A
LinkS	437.71	438.55	40.43	0.00	1248.87	0.350	0.54	4.447	A
Ind	76.86	76.97	310.74	0.00	916.27	0.084	0.09	4.291	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
LinkN	246.11	246.41	41.38	0.00	1122.75	0.219	0.28	4.110	A
LinkS	366.56	367.07	33.85	0.00	1252.67	0.293	0.42	4.068	A
Ind	64.37	64.44	260.10	0.00	942.21	0.068	0.07	4.102	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]

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Filename: LLRJ4_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\LLR\Junction 4
Report generation date: 15/06/2018 08:41:32

» (Default Analysis Set) - 2029 Base, AM
» (Default Analysis Set) - 2029 Base, PM
» (Default Analysis Set) - 2029 Base + Dev, AM
» (Default Analysis Set) - 2029 Base + Dev, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A1 - 2029 Base								
Arm 5420E	0.36	3.94	0.26	A	0.19	3.30	0.16	A
Arm LRS	0.60	4.53	0.37	A	0.27	3.52	0.21	A
Arm 5420W	0.21	3.26	0.17	A	0.17	2.78	0.15	A
Arm 4	0.33	3.29	0.25	A	0.30	3.29	0.23	A
A1 - 2029 Base + Dev								
Arm 5420E	0.51	4.76	0.34	A	0.28	3.86	0.22	A
Arm LRS	1.32	6.79	0.57	A	0.67	4.75	0.40	A
Arm 5420W	0.45	4.04	0.31	A	0.37	3.32	0.27	A
Arm 4	0.38	3.79	0.28	A	0.34	3.79	0.26	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2029 Base, AM " model duration: 07:45 - 09:15
"D2 - 2029 Base, PM" model duration: 16:45 - 18:15
"D3 - 2029 Base + Dev, AM" model duration: 07:45 - 09:15
"D4 - 2029 Base + Dev, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.6.541 at 15/06/2018 08:41:27

File summary

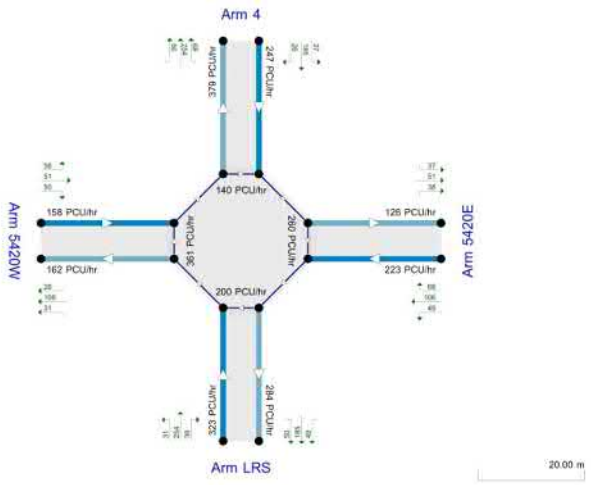
Title	(untitled)
Location	
Site Number	
Date	14/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2029 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2029 Base, AM	2029 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	LLR Junction 3	Roundabout	5420E,LRS,5420W,4			3.86	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
5420E	5420E	B5420 E	
LRS	LRS	Link Rd S	
5420W	5420W	B5420 W	
4	4	LRN	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
5420E	0.00	99999.00
LRS	0.00	99999.00
5420W	0.00	99999.00
4	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
5420E	3.00	6.70	20.50	10.00	32.00	44.00	
LRS	3.30	6.50	15.40	11.00	32.00	45.00	
5420W	3.50	6.60	19.50	32.00	32.00	36.00	
4	3.60	6.00	19.70	12.00	32.00	26.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
5420E		(calculated)	(calculated)	0.577	1461.770
LRS		(calculated)	(calculated)	0.574	1436.603
5420W		(calculated)	(calculated)	0.651	1678.903
4		(calculated)	(calculated)	0.626	1583.808

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
5420E	ONE HOUR	✓	297.00	100.000
LRS	ONE HOUR	✓	431.00	100.000
5420W	ONE HOUR	✓	210.00	100.000
4	ONE HOUR	✓	329.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		5420E	**LRS**	**5420W**	**4**
From	**5420E**	0.000	65.000	141.000	91.000
	LRS	51.000	0.000	41.000	339.000
	5420W	68.000	67.000	0.000	75.000
	4	49.000	246.000	34.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		5420E	**LRS**	**5420W**	**4**
From	**5420E**	0.00	0.22	0.47	0.31
	LRS	0.12	0.00	0.10	0.79
	5420W	0.32	0.32	0.00	0.36
	4	0.15	0.75	0.10	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		5420E	LRS	5420W	4
From	5420E	1.000	1.000	1.000	1.000
	LRS	1.000	1.000	1.000	1.000
	5420W	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		5420E	LRS	5420W	4
From	5420E	0.0	0.0	0.0	0.0
	LRS	0.0	0.0	0.0	0.0
	5420W	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
5420E	0.26	3.94	0.36	A
LRS	0.37	4.53	0.60	A
5420W	0.17	3.26	0.21	A
4	0.25	3.29	0.33	A

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
5420E	223.60	222.78	260.41	0.00	1311.52	0.170	0.20	3.305	A
LRS	324.48	323.19	199.54	0.00	1322.16	0.245	0.32	3.598	A
5420W	158.10	157.61	360.70	0.00	1444.22	0.109	0.12	2.798	A
4	247.69	246.90	139.56	0.00	1496.41	0.166	0.20	2.880	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
5420E	267.00	266.77	311.73	0.00	1281.91	0.208	0.26	3.546	A
LRS	387.46	387.07	238.93	0.00	1299.57	0.298	0.42	3.943	A
5420W	188.79	188.65	431.98	0.00	1397.85	0.135	0.16	2.976	A
4	295.76	295.56	167.08	0.00	1479.18	0.200	0.25	3.041	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
5420E	327.00	326.63	381.71	0.00	1241.53	0.263	0.36	3.933	A
LRS	474.54	473.86	292.55	0.00	1268.82	0.374	0.59	4.524	A
5420W	231.21	231.00	528.86	0.00	1334.82	0.173	0.21	3.261	A
4	362.24	361.91	204.57	0.00	1455.70	0.249	0.33	3.291	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
5420E	327.00	327.00	382.05	0.00	1241.33	0.263	0.36	3.937	A
LRS	474.54	474.53	292.87	0.00	1268.63	0.374	0.60	4.533	A
5420W	231.21	231.21	529.58	0.00	1334.35	0.173	0.21	3.262	A
4	362.24	362.23	204.79	0.00	1455.57	0.249	0.33	3.291	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
5420E	267.00	267.37	312.28	0.00	1281.59	0.208	0.26	3.549	A
LRS	387.46	388.13	239.45	0.00	1299.27	0.298	0.43	3.955	A
5420W	188.79	188.99	433.13	0.00	1397.10	0.135	0.16	2.979	A
4	295.76	296.08	167.42	0.00	1478.97	0.200	0.25	3.043	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
5420E	223.60	223.83	261.46	0.00	1310.91	0.171	0.21	3.311	A
LRS	324.48	324.88	200.46	0.00	1321.63	0.246	0.33	3.612	A
5420W	158.10	158.23	362.56	0.00	1443.02	0.110	0.12	2.803	A
4	247.69	247.90	140.16	0.00	1496.04	0.166	0.20	2.886	A

(Default Analysis Set) - 2029 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2029 Base, PM	2029 Base	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	LLR Junction 3	Roundabout	5420E,LRS,5420W,4			3.24	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
5420E	5420E	B5420 E	
LRS	LRS	Link Rd S	
5420W	5420W	B5420 W	
4	4	LRN	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
5420E	0.00	99999.00
LRS	0.00	99999.00
5420W	0.00	99999.00
4	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
5420E	3.00	6.70	20.50	10.00	32.00	44.00	
LRS	3.30	6.50	15.40	11.00	32.00	45.00	
5420W	3.50	6.60	19.50	32.00	32.00	36.00	
4	3.60	6.00	19.70	12.00	32.00	26.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
5420E		(calculated)	(calculated)	0.577	1461.770
LRS		(calculated)	(calculated)	0.574	1436.603
5420W		(calculated)	(calculated)	0.651	1678.903
4		(calculated)	(calculated)	0.626	1583.808

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
5420E	ONE HOUR	✓	184.00	100.000
LRS	ONE HOUR	✓	251.00	100.000
5420W	ONE HOUR	✓	206.00	100.000
4	ONE HOUR	✓	296.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		5420E	LRS	5420W	4
From	5420E	0.000	29.000	124.000	31.000
	LRS	53.000	0.000	64.000	134.000
	5420W	160.000	26.000	0.000	20.000
	4	56.000	176.000	64.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		5420E	LRS	5420W	4
From	5420E	0.00	0.16	0.67	0.17
	LRS	0.21	0.00	0.25	0.53
	5420W	0.78	0.13	0.00	0.10
	4	0.19	0.59	0.22	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		5420E	LRS	5420W	4
From	5420E	1.000	1.000	1.000	1.000
	LRS	1.000	1.000	1.000	1.000
	5420W	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		5420E	LRS	5420W	4
From	5420E	0.0	0.0	0.0	0.0
	LRS	0.0	0.0	0.0	0.0
	5420W	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
5420E	0.16	3.30	0.19	A
LRS	0.21	3.52	0.27	A
5420W	0.15	2.78	0.17	A
4	0.23	3.29	0.30	A

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
5420E	138.52	138.07	199.63	0.00	1346.59	0.103	0.11	2.979	A
LRS	188.97	188.31	164.34	0.00	1342.35	0.141	0.16	3.118	A
5420W	155.09	154.65	163.56	0.00	1572.49	0.099	0.11	2.539	A
4	222.84	222.13	179.40	0.00	1471.47	0.151	0.18	2.880	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
5420E	165.41	165.30	238.97	0.00	1323.89	0.125	0.14	3.106	A
LRS	225.64	225.48	196.74	0.00	1323.77	0.170	0.20	3.277	A
5420W	185.19	185.09	195.84	0.00	1551.49	0.119	0.14	2.634	A
4	266.10	265.91	214.73	0.00	1449.34	0.184	0.22	3.041	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
5420E	202.59	202.42	292.62	0.00	1292.93	0.157	0.19	3.300	A
LRS	276.36	276.10	240.92	0.00	1298.43	0.213	0.27	3.521	A
5420W	226.81	226.65	239.80	0.00	1522.88	0.149	0.17	2.777	A
4	325.90	325.61	262.95	0.00	1419.15	0.230	0.30	3.292	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
5420E	202.59	202.59	292.87	0.00	1292.79	0.157	0.19	3.301	A
LRS	276.36	276.35	241.12	0.00	1298.31	0.213	0.27	3.521	A
5420W	226.81	226.81	240.02	0.00	1522.74	0.149	0.17	2.777	A
4	325.90	325.90	263.14	0.00	1419.03	0.230	0.30	3.292	A

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
5420E	165.41	165.58	239.38	0.00	1323.65	0.125	0.14	3.110	A
LRS	225.64	225.90	197.08	0.00	1323.57	0.170	0.21	3.282	A
5420W	185.19	185.34	196.19	0.00	1551.26	0.119	0.14	2.637	A
4	266.10	266.38	215.05	0.00	1449.14	0.184	0.23	3.043	A

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
5420E	138.52	138.64	200.42	0.00	1346.13	0.103	0.12	2.983	A
LRS	188.97	189.13	165.01	0.00	1341.96	0.141	0.16	3.122	A
5420W	155.09	155.19	164.27	0.00	1572.03	0.099	0.11	2.542	A
4	222.84	223.03	180.06	0.00	1471.05	0.151	0.18	2.884	A

(Default Analysis Set) - 2029 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2029 Base + Dev, AM	2029 Base + Dev	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	LLR Junction 3	Roundabout	5420E,LRS,5420W,4			5.18	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
5420E	5420E	B5420 E	
LRS	LRS	Link Rd S	
5420W	5420W	B5420 W	
4	4	LRN	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
5420E	0.00	99999.00
LRS	0.00	99999.00
5420W	0.00	99999.00
4	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
5420E	3.00	6.70	20.50	10.00	32.00	44.00	
LRS	3.30	6.50	15.40	11.00	32.00	45.00	
5420W	3.50	6.60	19.50	32.00	32.00	36.00	
4	3.60	6.00	19.70	12.00	32.00	26.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
5420E		(calculated)	(calculated)	0.577	1461.770
LRS		(calculated)	(calculated)	0.574	1436.603
5420W		(calculated)	(calculated)	0.651	1678.903
4		(calculated)	(calculated)	0.626	1583.808

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
5420E	ONE HOUR	✓	349.00	100.000
LRS	ONE HOUR	✓	641.00	100.000
5420W	ONE HOUR	✓	368.00	100.000
4	ONE HOUR	✓	329.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		5420E	LRS	5420W	4
From	5420E	0.000	65.000	193.000	91.000
	LRS	103.000	0.000	199.000	339.000
	5420W	68.000	225.000	0.000	75.000
	4	49.000	246.000	34.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		5420E	LRS	5420W	4
From	5420E	0.00	0.19	0.55	0.26
	LRS	0.16	0.00	0.31	0.53
	5420W	0.18	0.61	0.00	0.20
	4	0.15	0.75	0.10	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		5420E	LRS	5420W	4
From	5420E	1.000	1.000	1.000	1.000
	LRS	1.000	1.000	1.000	1.000
	5420W	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		5420E	LRS	5420W	4
From	5420E	0.0	0.0	0.0	0.0
	LRS	0.0	0.0	0.0	0.0
	5420W	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
5420E	0.34	4.76	0.51	A
LRS	0.57	6.79	1.32	A
5420W	0.31	4.04	0.45	A
4	0.28	3.79	0.38	A

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
5420E	262.75	261.68	378.87	0.00	1243.17	0.211	0.27	3.665	A
LRS	482.58	480.23	238.45	0.00	1299.84	0.371	0.59	4.380	A
5420W	277.05	276.08	399.38	0.00	1419.06	0.195	0.24	3.146	A
4	247.69	246.83	296.98	0.00	1397.83	0.177	0.21	3.126	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
5420E	313.74	313.40	453.59	0.00	1200.05	0.261	0.35	4.060	A
LRS	576.25	575.31	285.57	0.00	1272.82	0.453	0.82	5.155	A
5420W	330.82	330.52	478.42	0.00	1367.63	0.242	0.32	3.471	A
4	295.76	295.52	355.60	0.00	1361.13	0.217	0.28	3.378	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
5420E	384.26	383.65	555.34	0.00	1141.35	0.337	0.50	4.747	A
LRS	705.75	703.80	349.59	0.00	1236.10	0.571	1.31	6.739	A
5420W	405.18	404.64	585.34	0.00	1298.07	0.312	0.45	4.026	A
4	362.24	361.82	435.26	0.00	1311.24	0.276	0.38	3.789	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
5420E	384.26	384.25	556.01	0.00	1140.96	0.337	0.51	4.757	A
LRS	705.75	705.71	350.12	0.00	1235.80	0.571	1.32	6.791	A
5420W	405.18	405.17	586.81	0.00	1297.11	0.312	0.45	4.035	A
4	362.24	362.23	435.99	0.00	1310.79	0.276	0.38	3.794	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
5420E	313.74	314.34	454.65	0.00	1199.44	0.262	0.36	4.071	A
LRS	576.25	578.18	286.40	0.00	1272.34	0.453	0.84	5.199	A
5420W	330.82	331.35	480.65	0.00	1366.19	0.242	0.32	3.482	A
4	295.76	296.17	356.73	0.00	1360.42	0.217	0.28	3.383	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
5420E	262.75	263.09	380.59	0.00	1242.17	0.212	0.27	3.677	A
LRS	482.58	483.54	239.72	0.00	1299.12	0.371	0.60	4.418	A
5420W	277.05	277.36	402.03	0.00	1417.34	0.195	0.24	3.160	A
4	247.69	247.94	298.53	0.00	1396.87	0.177	0.22	3.135	A

(Default Analysis Set) - 2029 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2029 Base + Dev, PM	2029 Base + Dev	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Junction Delay (s)	Junction LOS
1	LLR Junction 3	Roundabout	5420E,LRS,5420W,4			4.00	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
5420E	5420E	B5420 E	
LRS	LRS	Link Rd S	
5420W	5420W	B5420 W	
4	4	LRN	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
5420E	0.00	99999.00
LRS	0.00	99999.00
5420W	0.00	99999.00
4	0.00	99999.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
5420E	3.00	6.70	20.50	10.00	32.00	44.00	
LRS	3.30	6.50	15.40	11.00	32.00	45.00	
5420W	3.50	6.60	19.50	32.00	32.00	36.00	
4	3.60	6.00	19.70	12.00	32.00	26.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
5420E		(calculated)	(calculated)	0.577	1461.770
LRS		(calculated)	(calculated)	0.574	1436.603
5420W		(calculated)	(calculated)	0.651	1678.903
4		(calculated)	(calculated)	0.626	1583.808

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
5420E	ONE HOUR	✓	236.00	100.000
LRS	ONE HOUR	✓	461.00	100.000
5420W	ONE HOUR	✓	364.00	100.000
4	ONE HOUR	✓	296.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		5420E	LRS	5420W	4
From	5420E	0.000	29.000	176.000	31.000
	LRS	105.000	0.000	222.000	134.000
	5420W	160.000	184.000	0.000	20.000
	4	56.000	176.000	64.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		5420E	LRS	5420W	4
From	5420E	0.00	0.12	0.75	0.13
	LRS	0.23	0.00	0.48	0.29
	5420W	0.44	0.51	0.00	0.05
	4	0.19	0.59	0.22	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		5420E	LRS	5420W	4
From	5420E	1.000	1.000	1.000	1.000
	LRS	1.000	1.000	1.000	1.000
	5420W	1.000	1.000	1.000	1.000
	4	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		5420E	LRS	5420W	4
From	5420E	0.0	0.0	0.0	0.0
	LRS	0.0	0.0	0.0	0.0
	5420W	0.0	0.0	0.0	0.0
	4	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
5420E	0.22	3.86	0.28	A
LRS	0.40	4.75	0.67	A
5420W	0.27	3.32	0.37	A
4	0.26	3.79	0.34	A

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
5420E	177.67	177.03	318.15	0.00	1278.20	0.139	0.16	3.267	A
LRS	347.06	345.65	203.29	0.00	1320.01	0.263	0.35	3.690	A
5420W	274.04	273.18	202.45	0.00	1547.19	0.177	0.21	2.824	A
4	222.84	222.07	336.90	0.00	1372.84	0.162	0.19	3.127	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
5420E	212.16	211.98	380.87	0.00	1242.01	0.171	0.21	3.494	A
LRS	414.43	413.98	243.42	0.00	1296.99	0.320	0.47	4.075	A
5420W	327.23	326.99	242.47	0.00	1521.15	0.215	0.27	3.014	A
4	266.10	265.88	403.32	0.00	1331.25	0.200	0.25	3.378	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
5420E	259.84	259.55	466.34	0.00	1192.70	0.218	0.28	3.857	A
LRS	507.57	506.78	298.04	0.00	1265.67	0.401	0.66	4.739	A
5420W	400.77	400.39	296.83	0.00	1485.78	0.270	0.37	3.317	A
4	325.90	325.53	493.82	0.00	1274.57	0.256	0.34	3.790	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
5420E	259.84	259.84	466.83	0.00	1192.42	0.218	0.28	3.860	A
LRS	507.57	507.56	298.37	0.00	1265.48	0.401	0.67	4.749	A
5420W	400.77	400.77	297.27	0.00	1485.49	0.270	0.37	3.318	A
4	325.90	325.90	494.35	0.00	1274.24	0.256	0.34	3.795	A

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
5420E	212.16	212.44	381.65	0.00	1241.56	0.171	0.21	3.498	A
LRS	414.43	415.21	243.95	0.00	1296.69	0.320	0.47	4.087	A
5420W	327.23	327.60	243.16	0.00	1520.70	0.215	0.28	3.019	A
4	266.10	266.46	404.17	0.00	1330.71	0.200	0.25	3.383	A

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
5420E	177.67	177.85	319.51	0.00	1277.41	0.139	0.16	3.273	A
LRS	347.06	347.52	204.23	0.00	1319.47	0.263	0.36	3.707	A
5420W	274.04	274.27	203.53	0.00	1546.48	0.177	0.22	2.829	A
4	222.84	223.07	338.36	0.00	1371.92	0.162	0.19	3.133	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: LLR_J5_Final.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\LLR\Junction Mini\2018 DF
Report generation date: 15/06/2018 08:50:38

» (Default Analysis Set) - Base 2029, AM
» (Default Analysis Set) - Base 2029, PM
» (Default Analysis Set) - Base + Dev 2029, AM
» (Default Analysis Set) - Base + Dev 2029, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A1 - Base + Dev 2029								
Arm DevE	0.06	7.63	0.06	A	0.05	6.73	0.05	A
Arm LRS	0.84	4.73	0.46	A	0.40	3.58	0.29	A
Arm DevW	0.01	8.03	0.01	A	0.02	6.18	0.02	A
Arm LRN	1.17	8.14	0.54	A	0.74	6.40	0.43	A
A1 - Base 2029								
Arm DevE	0.05	6.27	0.05	A	0.04	5.65	0.04	A
Arm LRS	0.50	3.85	0.34	A	0.19	3.05	0.16	A
Arm DevW	0.01	6.52	0.01	A	0.01	5.24	0.01	A
Arm LRN	0.57	5.84	0.36	A	0.33	4.89	0.25	A

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - Base 2029, AM " model duration: 07:45 - 09:15
"D2 - Base 2029, PM" model duration: 16:45 - 18:15
"D3 - Base + Dev 2029, AM" model duration: 07:45 - 09:15
"D4 - Base + Dev 2029, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.6.541 at 15/06/2018 08:50:34

File summary

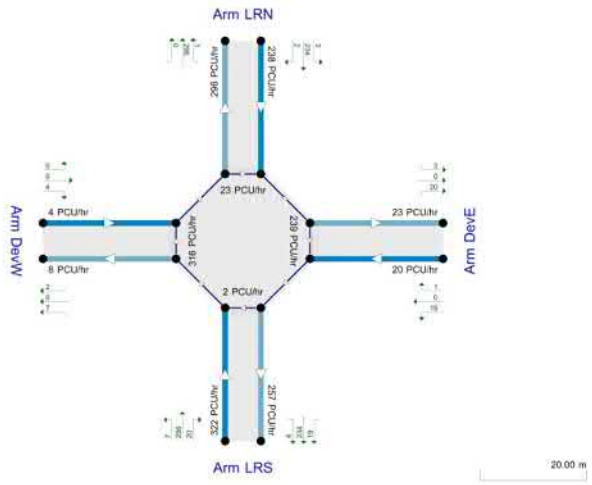
Title	(untitled)
Location	
Site Number	
Date	20/07/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	rogersa2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - Base 2029, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Base 2029, AM	Base 2029	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	Mini-roundabout	DevE,LRS,DevW,LRN	4.76	A

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
DevE	DevE	Dev Access E	
LRS	LRS	Link Rd S	
DevW	DevW	Dev Access W	
LRN	LRN	LRN	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
DevE	0.00	99999.00
LRS	0.00	99999.00
DevW	0.00	99999.00
LRN	0.00	99999.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
DevE	3.80	3.80	5.00	6.70	16.70	10.80	0.00	
LRS	3.60	3.60	5.00	5.30	20.00	19.80	0.00	
DevW	3.60	3.60	5.00	9.80	16.30	12.50	0.00	
LRN	3.60	3.60	5.00	4.30	20.00	17.30	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
DevE		(calculated)	(calculated)	0.588	810.054
LRS		(calculated)	(calculated)	1.094	1411.609
DevW		(calculated)	(calculated)	0.596	833.429
LRN		(calculated)	(calculated)	0.718	990.635

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
DevE	ONE HOUR	✓	27.00	100.000
LRS	ONE HOUR	✓	429.00	100.000
DevW	ONE HOUR	✓	5.00	100.000
LRN	ONE HOUR	✓	318.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	**DevE**	20.33	20.33		
07:45-08:00	**LRS**	322.97	322.97		
07:45-08:00	**DevW**	3.76	3.76		
07:45-08:00	**LRN**	239.41	239.41		
08:00-08:15	**DevE**	24.27	24.27		
08:00-08:15	**LRS**	385.66	385.66		
08:00-08:15	**DevW**	4.49	4.49		
08:00-08:15	**LRN**	285.88	285.88		
08:15-08:30	**DevE**	29.73	29.73		
08:15-08:30	**LRS**	472.34	472.34		
08:15-08:30	**DevW**	5.51	5.51		
08:15-08:30	**LRN**	350.12	350.12		
08:30-08:45	**DevE**	29.73	29.73		
08:30-08:45	**LRS**	472.34	472.34		
08:30-08:45	**DevW**	5.51	5.51		
08:30-08:45	**LRN**	350.12	350.12		
08:45-09:00	**DevE**	24.27	24.27		
08:45-09:00	**LRS**	385.66	385.66		
08:45-09:00	**DevW**	4.49	4.49		
08:45-09:00	**LRN**	285.88	285.88		
09:00-09:15	**DevE**	20.33	20.33		
09:00-09:15	**LRS**	322.97	322.97		
09:00-09:15	**DevW**	3.76	3.76		
09:00-09:15	**LRN**	239.41	239.41		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		DevE	**LRS**	**DevW**	**LRN**
From	**DevE**	0.000	26.000	0.000	1.000
	LRS	26.000	0.000	9.000	394.000
	DevW	0.000	5.000	0.000	0.000
	LRN	4.000	312.000	2.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		DevE	**LRS**	**DevW**	**LRN**
From	**DevE**	0.00	0.96	0.00	0.04
	LRS	0.06	0.00	0.02	0.92
	DevW	0.00	1.00	0.00	0.00
	LRN	0.01	0.98	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		DevE	LRS	DevW	LRN
From	DevE	1.000	1.000	1.000	1.000
	LRS	1.000	1.000	1.000	1.000
	DevW	1.000	1.000	1.000	1.000
	LRN	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		DevE	LRS	DevW	LRN
From	DevE	0.0	0.0	0.0	0.0
	LRS	0.0	0.0	0.0	0.0
	DevW	0.0	0.0	0.0	0.0
	LRN	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
DevE	0.05	6.27	0.05	A
LRS	0.34	3.85	0.50	A
DevW	0.01	6.52	0.01	A
LRN	0.36	5.84	0.57	A

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
DevE	20.33	20.20	238.86	0.00	669.62	0.030	0.03	5.543	A
LRS	322.97	321.79	2.25	0.00	1409.15	0.229	0.30	3.308	A
DevW	3.76	3.74	315.79	0.00	645.34	0.006	0.01	5.610	A
LRN	239.41	238.11	23.24	0.00	973.95	0.246	0.32	4.885	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
DevE	24.27	24.24	286.41	0.00	641.66	0.038	0.04	5.830	A
LRS	385.66	385.35	2.69	0.00	1408.66	0.274	0.38	3.518	A
DevW	4.49	4.49	378.16	0.00	608.19	0.007	0.01	5.962	A
LRN	285.88	285.51	27.84	0.00	970.65	0.295	0.41	5.252	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
DevE	29.73	29.68	350.63	0.00	603.91	0.049	0.05	6.269	A
LRS	472.34	471.83	3.30	0.00	1408.00	0.335	0.50	3.844	A
DevW	5.51	5.50	463.03	0.00	557.64	0.010	0.01	6.519	A
LRN	350.12	349.53	34.09	0.00	966.16	0.362	0.56	5.831	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
DevE	29.73	29.73	351.21	0.00	603.56	0.049	0.05	6.272	A
LRS	472.34	472.33	3.30	0.00	1408.00	0.335	0.50	3.847	A
DevW	5.51	5.50	463.52	0.00	557.35	0.010	0.01	6.522	A
LRN	350.12	350.11	34.13	0.00	966.13	0.362	0.57	5.843	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
DevE	24.27	24.32	287.36	0.00	641.11	0.038	0.04	5.836	A
LRS	385.66	386.16	2.70	0.00	1408.65	0.274	0.38	3.524	A
DevW	4.49	4.50	378.96	0.00	607.72	0.007	0.01	5.967	A
LRN	285.88	286.45	27.91	0.00	970.60	0.295	0.42	5.266	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
DevE	20.33	20.36	240.53	0.00	668.64	0.030	0.03	5.555	A
LRS	322.97	323.29	2.26	0.00	1409.13	0.229	0.30	3.315	A
DevW	3.76	3.77	317.27	0.00	644.46	0.006	0.01	5.618	A
LRN	239.41	239.78	23.36	0.00	973.86	0.246	0.33	4.908	A

(Default Analysis Set) - Base 2029, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Base 2029, PM	Base 2029	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	Mini-roundabout	DevE,LRS,DevW,LRN	4.11	A

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
DevE	DevE	Dev Access E	
LRS	LRS	Link Rd S	
DevW	DevW	Dev Access W	
LRN	LRN	LRN	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
DevE	0.00	99999.00
LRS	0.00	99999.00
DevW	0.00	99999.00
LRN	0.00	99999.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
DevE	3.80	3.80	5.00	6.70	16.70	10.80	0.00	
LRS	3.60	3.60	5.00	5.30	20.00	19.80	0.00	
DevW	3.60	3.60	5.00	9.80	16.30	12.50	0.00	
LRN	3.60	3.60	5.00	4.30	20.00	17.30	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
DevE		(calculated)	(calculated)	0.588	810.054
LRS		(calculated)	(calculated)	1.094	1411.609
DevW		(calculated)	(calculated)	0.596	833.429
LRN		(calculated)	(calculated)	0.718	990.635

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
DevE	ONE HOUR	✓	23.00	100.000
LRS	ONE HOUR	✓	208.00	100.000
DevW	ONE HOUR	✓	9.00	100.000
LRN	ONE HOUR	✓	221.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowinPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	DevE	17.32	17.32		
16:45-17:00	LRS	156.59	156.59		
16:45-17:00	DevW	6.78	6.78		
16:45-17:00	LRN	166.38	166.38		
17:00-17:15	DevE	20.68	20.68		
17:00-17:15	LRS	186.99	186.99		
17:00-17:15	DevW	8.09	8.09		
17:00-17:15	LRN	198.67	198.67		
17:15-17:30	DevE	25.32	25.32		
17:15-17:30	LRS	229.01	229.01		
17:15-17:30	DevW	9.91	9.91		
17:15-17:30	LRN	243.33	243.33		
17:30-17:45	DevE	25.32	25.32		
17:30-17:45	LRS	229.01	229.01		
17:30-17:45	DevW	9.91	9.91		
17:30-17:45	LRN	243.33	243.33		
17:45-18:00	DevE	20.68	20.68		
17:45-18:00	LRS	186.99	186.99		
17:45-18:00	DevW	8.09	8.09		
17:45-18:00	LRN	198.67	198.67		
18:00-18:15	DevE	17.32	17.32		
18:00-18:15	LRS	156.59	156.59		
18:00-18:15	DevW	6.78	6.78		
18:00-18:15	LRN	166.38	166.38		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		DevE	LRS	DevW	LRN
From	DevE	0.000	20.000	0.000	3.000
	LRS	6.000	0.000	2.000	200.000
	DevW	0.000	8.000	0.000	1.000
	LRN	1.000	220.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		DevE	LRS	DevW	LRN
From	DevE	0.00	0.87	0.00	0.13
	LRS	0.03	0.00	0.01	0.96
	DevW	0.00	0.89	0.00	0.11
	LRN	0.00	1.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		DevE	LRS	DevW	LRN
From	DevE	1.000	1.000	1.000	1.000
	LRS	1.000	1.000	1.000	1.000
	DevW	1.000	1.000	1.000	1.000
	LRN	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		DevE	LRS	DevW	LRN
From	DevE	0.0	0.0	0.0	0.0
	LRS	0.0	0.0	0.0	0.0
	DevW	0.0	0.0	0.0	0.0
	LRN	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
DevE	0.04	5.65	0.04	A
LRS	0.16	3.05	0.19	A
DevW	0.01	5.24	0.01	A
LRN	0.25	4.89	0.33	A

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
DevE	17.32	17.22	170.81	0.00	709.63	0.024	0.02	5.199	A
LRS	156.59	156.10	2.25	0.00	1409.15	0.111	0.12	2.871	A
DevW	6.78	6.74	156.84	0.00	740.01	0.009	0.01	4.909	A
LRN	166.38	165.57	10.49	0.00	983.10	0.169	0.20	4.398	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
DevE	20.68	20.65	204.76	0.00	689.67	0.030	0.03	5.380	A
LRS	186.99	186.88	2.69	0.00	1408.66	0.133	0.15	2.946	A
DevW	8.09	8.08	187.77	0.00	721.59	0.011	0.01	5.045	A
LRN	198.67	198.48	12.58	0.00	981.61	0.202	0.25	4.595	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
DevE	25.32	25.29	250.72	0.00	662.65	0.038	0.04	5.648	A
LRS	229.01	228.85	3.30	0.00	1408.00	0.163	0.19	3.052	A
DevW	9.91	9.90	229.95	0.00	696.47	0.014	0.01	5.243	A
LRN	243.33	243.02	15.40	0.00	979.58	0.248	0.33	4.885	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
DevE	25.32	25.32	251.03	0.00	662.47	0.038	0.04	5.649	A
LRS	229.01	229.01	3.30	0.00	1408.00	0.163	0.19	3.052	A
DevW	9.91	9.91	230.11	0.00	696.37	0.014	0.01	5.243	A
LRN	243.33	243.32	15.41	0.00	979.57	0.248	0.33	4.889	A

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
DevE	20.68	20.71	205.27	0.00	689.37	0.030	0.03	5.383	A
LRS	186.99	187.15	2.70	0.00	1408.65	0.133	0.15	2.949	A
DevW	8.09	8.10	188.05	0.00	721.42	0.011	0.01	5.046	A
LRN	198.67	198.97	12.60	0.00	981.59	0.202	0.26	4.603	A

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
DevE	17.32	17.34	171.86	0.00	709.01	0.024	0.03	5.204	A
LRS	156.59	156.71	2.26	0.00	1409.13	0.111	0.13	2.874	A
DevW	6.78	6.78	157.46	0.00	739.64	0.009	0.01	4.913	A
LRN	166.38	166.58	10.55	0.00	983.06	0.169	0.20	4.411	A

(Default Analysis Set) - Base + Dev 2029, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Base + Dev 2029, AM	Base + Dev 2029	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	Mini-roundabout	DevE,LRS,DevW,LRN	6.30	A

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
DevE	DevE	Dev Access E	
LRS	LRS	Link Rd S	
DevW	DevW	Dev Access W	
LRN	LRN	LRN	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
DevE	0.00	99999.00
LRS	0.00	99999.00
DevW	0.00	99999.00
LRN	0.00	99999.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
DevE	3.80	3.80	5.00	6.70	16.70	10.80	0.00	
LRS	3.60	3.60	5.00	5.30	20.00	19.80	0.00	
DevW	3.60	3.60	5.00	9.80	16.30	12.50	0.00	
LRN	3.60	3.60	5.00	4.30	20.00	17.30	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
DevE		(calculated)	(calculated)	0.588	810.054
LRS		(calculated)	(calculated)	1.094	1411.609
DevW		(calculated)	(calculated)	0.596	833.429
LRN		(calculated)	(calculated)	0.718	990.635

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
DevE	ONE HOUR	✓	27.00	100.000
LRS	ONE HOUR	✓	587.00	100.000
DevW	ONE HOUR	✓	5.00	100.000
LRN	ONE HOUR	✓	476.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	DevE	20.33	20.33		
07:45-08:00	LRS	441.92	441.92		
07:45-08:00	DevW	3.76	3.76		
07:45-08:00	LRN	358.36	358.36		
08:00-08:15	DevE	24.27	24.27		
08:00-08:15	LRS	527.70	527.70		
08:00-08:15	DevW	4.49	4.49		
08:00-08:15	LRN	427.91	427.91		
08:15-08:30	DevE	29.73	29.73		
08:15-08:30	LRS	646.30	646.30		
08:15-08:30	DevW	5.51	5.51		
08:15-08:30	LRN	524.09	524.09		
08:30-08:45	DevE	29.73	29.73		
08:30-08:45	LRS	646.30	646.30		
08:30-08:45	DevW	5.51	5.51		
08:30-08:45	LRN	524.09	524.09		
08:45-09:00	DevE	24.27	24.27		
08:45-09:00	LRS	527.70	527.70		
08:45-09:00	DevW	4.49	4.49		
08:45-09:00	LRN	427.91	427.91		
09:00-09:15	DevE	20.33	20.33		
09:00-09:15	LRS	441.92	441.92		
09:00-09:15	DevW	3.76	3.76		
09:00-09:15	LRN	358.36	358.36		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		DevE	LRS	DevW	LRN
From	DevE	0.000	26.000	0.000	1.000
	LRS	26.000	0.000	9.000	552.000
	DevW	0.000	5.000	0.000	0.000
	LRN	4.000	470.000	2.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		DevE	LRS	DevW	LRN
From	DevE	0.00	0.96	0.00	0.04
	LRS	0.04	0.00	0.02	0.94
	DevW	0.00	1.00	0.00	0.00
	LRN	0.01	0.99	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		DevE	LRS	DevW	LRN
From	DevE	1.000	1.000	1.000	1.000
	LRS	1.000	1.000	1.000	1.000
	DevW	1.000	1.000	1.000	1.000
	LRN	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		DevE	LRS	DevW	LRN
From	DevE	0.0	0.0	0.0	0.0
	LRS	0.0	0.0	0.0	0.0
	DevW	0.0	0.0	0.0	0.0
	LRN	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
DevE	0.06	7.63	0.06	A
LRS	0.46	4.73	0.84	A
DevW	0.01	8.03	0.01	A
LRN	0.54	8.14	1.17	A

Main Results for each time segment

Main results: (07:45-08:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
DevE	20.33	20.19	356.80	0.00	600.28	0.034	0.03	6.204	A
LRS	441.92	440.11	2.24	0.00	1409.15	0.314	0.45	3.709	A
DevW	3.76	3.74	434.11	0.00	574.87	0.007	0.01	6.302	A
LRN	358.36	356.05	23.23	0.00	973.96	0.368	0.58	5.806	A

Main results: (08:00-08:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
DevE	24.27	24.23	428.00	0.00	558.41	0.043	0.05	6.738	A
LRS	527.70	527.14	2.69	0.00	1408.66	0.375	0.59	4.081	A
DevW	4.49	4.49	519.95	0.00	523.74	0.009	0.01	6.932	A
LRN	427.91	427.10	27.84	0.00	970.65	0.441	0.78	6.614	A

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
DevE	29.73	29.66	523.65	0.00	502.18	0.059	0.06	7.618	A
LRS	646.30	645.32	3.29	0.00	1408.01	0.459	0.84	4.714	A
DevW	5.51	5.49	636.52	0.00	454.31	0.012	0.01	8.021	A
LRN	524.09	522.55	34.07	0.00	966.17	0.542	1.16	8.083	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
DevE	29.73	29.73	525.14	0.00	501.30	0.059	0.06	7.633	A
LRS	646.30	646.28	3.30	0.00	1408.00	0.459	0.84	4.725	A
DevW	5.51	5.50	637.48	0.00	453.74	0.012	0.01	8.031	A
LRN	524.09	524.04	34.13	0.00	966.13	0.542	1.17	8.142	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
DevE	24.27	24.34	430.32	0.00	557.05	0.044	0.05	6.760	A
LRS	527.70	528.67	2.71	0.00	1408.65	0.375	0.60	4.095	A
DevW	4.49	4.51	521.46	0.00	522.84	0.009	0.01	6.944	A
LRN	427.91	429.42	27.93	0.00	970.59	0.441	0.80	6.672	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
DevE	20.33	20.37	359.95	0.00	598.42	0.034	0.04	6.229	A
LRS	441.92	442.50	2.26	0.00	1409.13	0.314	0.46	3.725	A
DevW	3.76	3.77	436.47	0.00	573.46	0.007	0.01	6.318	A
LRN	358.36	359.20	23.37	0.00	973.86	0.368	0.59	5.864	A

(Default Analysis Set) - Base + Dev 2029, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
Base + Dev 2029, PM	Base + Dev 2029	PM		ONE HOUR	16:45	18:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Junction Delay (s)	Junction LOS
1	(untitled)	Mini-roundabout	DevE,LRS,DevW,LRN	5.08	A

Junction Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Arm	Name	Description
DevE	DevE	Dev Access E	
LRS	LRS	Link Rd S	
DevW	DevW	Dev Access W	
LRN	LRN	LRN	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)
DevE	0.00	99999.00
LRS	0.00	99999.00
DevW	0.00	99999.00
LRN	0.00	99999.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
DevE	3.80	3.80	5.00	6.70	16.70	10.80	0.00	
LRS	3.60	3.60	5.00	5.30	20.00	19.80	0.00	
DevW	3.60	3.60	5.00	9.80	16.30	12.50	0.00	
LRN	3.60	3.60	5.00	4.30	20.00	17.30	0.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
DevE		(calculated)	(calculated)	0.588	810.054
LRS		(calculated)	(calculated)	1.094	1411.609
DevW		(calculated)	(calculated)	0.596	833.429
LRN		(calculated)	(calculated)	0.718	990.635

The slope and intercept shown above include any corrections and adjustments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
DevE	ONE HOUR	✓	23.00	100.000
LRS	ONE HOUR	✓	366.00	100.000
DevW	ONE HOUR	✓	9.00	100.000
LRN	ONE HOUR	✓	379.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowinPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	DevE	17.32	17.32		
16:45-17:00	LRS	275.54	275.54		
16:45-17:00	DevW	6.78	6.78		
16:45-17:00	LRN	285.33	285.33		
17:00-17:15	DevE	20.68	20.68		
17:00-17:15	LRS	329.03	329.03		
17:00-17:15	DevW	8.09	8.09		
17:00-17:15	LRN	340.71	340.71		
17:15-17:30	DevE	25.32	25.32		
17:15-17:30	LRS	402.97	402.97		
17:15-17:30	DevW	9.91	9.91		
17:15-17:30	LRN	417.29	417.29		
17:30-17:45	DevE	25.32	25.32		
17:30-17:45	LRS	402.97	402.97		
17:30-17:45	DevW	9.91	9.91		
17:30-17:45	LRN	417.29	417.29		
17:45-18:00	DevE	20.68	20.68		
17:45-18:00	LRS	329.03	329.03		
17:45-18:00	DevW	8.09	8.09		
17:45-18:00	LRN	340.71	340.71		
18:00-18:15	DevE	17.32	17.32		
18:00-18:15	LRS	275.54	275.54		
18:00-18:15	DevW	6.78	6.78		
18:00-18:15	LRN	285.33	285.33		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		DevE	LRS	DevW	LRN
From	DevE	0.000	20.000	0.000	3.000
	LRS	6.000	0.000	2.000	358.000
	DevW	0.000	8.000	0.000	1.000
	LRN	1.000	378.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		DevE	LRS	DevW	LRN
From	DevE	0.00	0.87	0.00	0.13
	LRS	0.02	0.00	0.01	0.98
	DevW	0.00	0.89	0.00	0.11
	LRN	0.00	1.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		DevE	LRS	DevW	LRN
From	DevE	1.000	1.000	1.000	1.000
	LRS	1.000	1.000	1.000	1.000
	DevW	1.000	1.000	1.000	1.000
	LRN	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		DevE	LRS	DevW	LRN
From	DevE	0.0	0.0	0.0	0.0
	LRS	0.0	0.0	0.0	0.0
	DevW	0.0	0.0	0.0	0.0
	LRN	0.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
DevE	0.05	6.73	0.05	A
LRS	0.29	3.58	0.40	A
DevW	0.02	6.18	0.02	A
LRN	0.43	6.40	0.74	A

Main Results for each time segment

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
DevE	17.32	17.21	288.95	0.00	640.17	0.027	0.03	5.779	A
LRS	275.54	274.58	2.24	0.00	1409.15	0.196	0.24	3.169	A
DevW	6.78	6.74	275.32	0.00	669.45	0.010	0.01	5.432	A
LRN	285.33	283.71	10.49	0.00	983.11	0.290	0.41	5.136	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
DevE	20.68	20.65	346.51	0.00	606.33	0.034	0.04	6.146	A
LRS	329.03	328.78	2.69	0.00	1408.66	0.234	0.30	3.333	A
DevW	8.09	8.08	329.68	0.00	637.07	0.013	0.01	5.722	A
LRN	340.71	340.23	12.57	0.00	981.61	0.347	0.53	5.609	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
DevE	25.32	25.28	424.16	0.00	560.68	0.045	0.05	6.723	A
LRS	402.97	402.59	3.30	0.00	1408.00	0.286	0.40	3.581	A
DevW	9.91	9.89	403.69	0.00	592.99	0.017	0.02	6.173	A
LRN	417.29	416.46	15.39	0.00	979.58	0.426	0.73	6.384	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
DevE	25.32	25.32	424.98	0.00	560.19	0.045	0.05	6.729	A
LRS	402.97	402.97	3.30	0.00	1408.00	0.286	0.40	3.581	A
DevW	9.91	9.91	404.07	0.00	592.76	0.017	0.02	6.175	A
LRN	417.29	417.27	15.41	0.00	979.57	0.426	0.74	6.401	A

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
DevE	20.68	20.72	347.82	0.00	605.56	0.034	0.04	6.155	A
LRS	329.03	329.40	2.70	0.00	1408.65	0.234	0.31	3.336	A
DevW	8.09	8.11	330.30	0.00	636.70	0.013	0.01	5.726	A
LRN	340.71	341.52	12.61	0.00	981.59	0.347	0.54	5.633	A

Main results: (18:00-18:15)

Arm	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
DevE	17.32	17.35	291.11	0.00	638.90	0.027	0.03	5.791	A
LRS	275.54	275.79	2.26	0.00	1409.13	0.196	0.24	3.178	A
DevW	6.78	6.79	276.55	0.00	668.71	0.010	0.01	5.438	A
LRN	285.33	285.83	10.55	0.00	983.06	0.290	0.41	5.166	A

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.6.541 [19821,26/11/2015]
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Filename: UR4_B5111_FINAL.arc8
Path: F:\PROJECTS\Development - North Wales Connection - Traffic and Transport\03 EXECUTION\07 Working Folder\Transport Assessment\Junction Modelling\UR4 B5111\2018 DF
Report generation date: 15/06/2018 09:02:10

» (Default Analysis Set) - 2018 Base, AM
» (Default Analysis Set) - 2018 Base, PM
» (Default Analysis Set) - 2023 Base, AM
» (Default Analysis Set) - 2023 Base, PM
» (Default Analysis Set) - 2023 Base + Dev, AM
» (Default Analysis Set) - 2023 Base + Dev, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2018 Base							
Stream B-AC	0.24	10.27	0.19	B	0.11	9.20	0.10	A
Stream C-AB	0.00	4.90	0.00	A	0.00	5.29	0.00	A
Stream C-A	-	-	-	-	-	-	-	-
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
	A1 - 2023 Base							
Stream B-AC	0.25	10.18	0.20	B	0.12	9.34	0.11	A
Stream C-AB	0.00	4.89	0.00	A	0.00	5.30	0.00	A
Stream C-A	-	-	-	-	-	-	-	-
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
	A1 - 2023 Base + Dev							
Stream B-AC	0.60	13.65	0.38	B	0.39	12.01	0.28	B
Stream C-AB	0.00	4.97	0.00	A	0.00	5.44	0.00	A
Stream C-A	-	-	-	-	-	-	-	-
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 2018 Base, AM " model duration: 07:45 - 09:15
"D2 - 2018 Base, PM" model duration: 16:30 - 18:00
"D3 - 2023 Base, AM" model duration: 07:45 - 09:15
"D4 - 2023 Base, PM" model duration: 16:30 - 18:00
"D5 - 2023 Base + Dev, AM" model duration: 07:45 - 09:15
"D6 - 2023 Base + Dev, PM" model duration: 16:30 - 18:00

Run using Junctions 8.0.6.541 at 15/06/2018 09:02:04

File summary

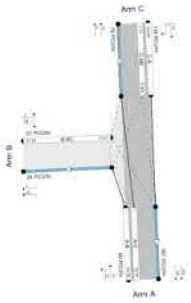
Title	(untitled)
Location	
Site Number	
Date	28/03/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	RogersA2
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75	✓		N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of ARCADY.

(Default Analysis Set) - 2018 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2018 Base, AM	2018 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wylfa Access	T-Junction	Two-way	A,B,C	10.10	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	B5111 S		Major
B	B	Rhos Y Bol		Minor
C	C	B5111 N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.30		0.00		2.20	200.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.85								✓		15	5

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	477.729	0.082	0.207	0.131	0.296
1	B-C	617.667	0.089	0.226	-	-
1	C-B	689.785	0.252	0.252	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	132.00	100.000
B	ONE HOUR	✓	76.00	100.000
C	ONE HOUR	✓	152.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	**A**	99.38	99.38		
07:45-08:00	**B**	57.22	57.22		
07:45-08:00	**C**	114.43	114.43		
08:00-08:15	**A**	118.67	118.67		
08:00-08:15	**B**	68.32	68.32		
08:00-08:15	**C**	136.64	136.64		
08:15-08:30	**A**	145.33	145.33		
08:15-08:30	**B**	83.68	83.68		
08:15-08:30	**C**	167.36	167.36		
08:30-08:45	**A**	145.33	145.33		
08:30-08:45	**B**	83.68	83.68		
08:30-08:45	**C**	167.36	167.36		
08:45-09:00	**A**	118.67	118.67		
08:45-09:00	**B**	68.32	68.32		
08:45-09:00	**C**	136.64	136.64		
09:00-09:15	**A**	99.38	99.38		
09:00-09:15	**B**	57.22	57.22		
09:00-09:15	**C**	114.43	114.43		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	30.000	102.000
	B	73.000	0.000	3.000
	C	150.000	2.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.23	0.77
	B	0.96	0.00	0.04
	C	0.99	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	0.19	10.27	0.24	−1	B
C-AB	0.00	4.90	0.00	−1	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	57.22	56.64	0.00	449.31	0.127	0.14	9.156	A
C-AB	1.77	1.76	0.00	735.69	0.002	0.00	4.904	A
C-A	112.66	112.66	0.00	-	-	-	-	-
A-B	22.59	22.59	0.00	-	-	-	-	-
A-C	76.79	76.79	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	68.32	68.18	0.00	442.94	0.154	0.18	9.598	A
C-AB	2.18	2.18	0.00	744.84	0.003	0.00	4.847	A
C-A	134.46	134.46	0.00	-	-	-	-	-
A-B	26.97	26.97	0.00	-	-	-	-	-
A-C	91.70	91.70	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	83.68	83.46	0.00	434.15	0.193	0.24	10.259	B
C-AB	2.79	2.79	0.00	757.56	0.004	0.00	4.769	A
C-A	164.56	164.56	0.00	-	-	-	-	-
A-B	33.03	33.03	0.00	-	-	-	-	-
A-C	112.30	112.30	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	83.68	83.67	0.00	434.15	0.193	0.24	10.271	B
C-AB	2.79	2.79	0.00	757.56	0.004	0.00	4.771	A
C-A	164.56	164.56	0.00	-	-	-	-	-
A-B	33.03	33.03	0.00	-	-	-	-	-
A-C	112.30	112.30	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	68.32	68.53	0.00	442.94	0.154	0.18	9.622	A
C-AB	2.18	2.19	0.00	744.84	0.003	0.00	4.848	A
C-A	134.46	134.46	0.00	-	-	-	-	-
A-B	26.97	26.97	0.00	-	-	-	-	-
A-C	91.70	91.70	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	57.22	57.36	0.00	449.30	0.127	0.15	9.190	A
C-AB	1.77	1.77	0.00	735.69	0.002	0.00	4.904	A
C-A	112.66	112.66	0.00	-	-	-	-	-
A-B	22.59	22.59	0.00	-	-	-	-	-
A-C	76.79	76.79	0.00	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.14	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.18	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.24	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.24	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.18	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.15	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2018 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2018 Base, PM	2018 Base	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wylfa Access	T-Junction	Two-way	A,B,C	8.99	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	B5111 S		Major
B	B	Rhos Y Bol		Minor
C	C	B5111 N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.30		0.00		2.20	200.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.85								✓		15	5

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	477.729	0.082	0.207	0.131	0.296
1	B-C	617.667	0.089	0.226	-	-
1	C-B	689.785	0.252	0.252	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	247.00	100.000
B	ONE HOUR	✓	40.00	100.000
C	ONE HOUR	✓	87.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:30-16:45	A	185.95	185.95		
16:30-16:45	B	30.11	30.11		
16:30-16:45	C	65.50	65.50		
16:45-17:00	A	222.05	222.05		
16:45-17:00	B	35.96	35.96		
16:45-17:00	C	78.21	78.21		
17:00-17:15	A	271.95	271.95		
17:00-17:15	B	44.04	44.04		
17:00-17:15	C	95.79	95.79		
17:15-17:30	A	271.95	271.95		
17:15-17:30	B	44.04	44.04		
17:15-17:30	C	95.79	95.79		
17:30-17:45	A	222.05	222.05		
17:30-17:45	B	35.96	35.96		
17:30-17:45	C	78.21	78.21		
17:45-18:00	A	185.95	185.95		
17:45-18:00	B	30.11	30.11		
17:45-18:00	C	65.50	65.50		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	91.000	156.000
	B	35.000	0.000	5.000
	C	85.000	2.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.37	0.63
	B	0.88	0.00	0.13
	C	0.98	0.02	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	0.10	9.20	0.11	−1	A
C-AB	0.00	5.29	0.00	−1	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	30.11	29.83	0.00	453.08	0.066	0.07	8.501	A
C-AB	1.66	1.65	0.00	683.98	0.002	0.00	5.275	A
C-A	63.84	63.84	0.00	-	-	-	-	-
A-B	68.51	68.51	0.00	-	-	-	-	-
A-C	117.44	117.44	0.00	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	35.96	35.89	0.00	445.58	0.081	0.09	8.786	A
C-AB	2.02	2.02	0.00	683.22	0.003	0.00	5.284	A
C-A	76.19	76.19	0.00	-	-	-	-	-
A-B	81.81	81.81	0.00	-	-	-	-	-
A-C	140.24	140.24	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	44.04	43.94	0.00	435.21	0.101	0.11	9.199	A
C-AB	2.55	2.54	0.00	682.35	0.004	0.00	5.295	A
C-A	93.24	93.24	0.00	-	-	-	-	-
A-B	100.19	100.19	0.00	-	-	-	-	-
A-C	171.76	171.76	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	44.04	44.04	0.00	435.21	0.101	0.11	9.202	A
C-AB	2.55	2.55	0.00	682.35	0.004	0.00	5.295	A
C-A	93.24	93.24	0.00	-	-	-	-	-
A-B	100.19	100.19	0.00	-	-	-	-	-
A-C	171.76	171.76	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	35.96	36.05	0.00	445.58	0.081	0.09	8.792	A
C-AB	2.02	2.03	0.00	683.22	0.003	0.00	5.286	A
C-A	76.19	76.19	0.00	-	-	-	-	-
A-B	81.81	81.81	0.00	-	-	-	-	-
A-C	140.24	140.24	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	30.11	30.18	0.00	453.08	0.066	0.07	8.513	A
C-AB	1.66	1.66	0.00	683.99	0.002	0.00	5.275	A
C-A	63.84	63.84	0.00	-	-	-	-	-
A-B	68.51	68.51	0.00	-	-	-	-	-
A-C	117.44	117.44	0.00	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.11	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.11	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:45-18:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, AM	2023 Base	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wylfa Access	T-Junction	Two-way	A,B,C	10.02	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	B5111 S		Major
B	B	Rhos Y Bol		Minor
C	C	B5111 N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.30		0.00		2.20	200.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.85								✓		15	5

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	477.729	0.082	0.207	0.131	0.296
1	B-C	617.667	0.089	0.226	-	-
1	C-B	689.785	0.252	0.252	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	140.00	100.000
B	ONE HOUR	✓	80.00	100.000
C	ONE HOUR	✓	161.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	105.40	105.40		
07:45-08:00	B	60.23	60.23		
07:45-08:00	C	121.21	121.21		
08:00-08:15	A	125.86	125.86		
08:00-08:15	B	71.92	71.92		
08:00-08:15	C	144.74	144.74		
08:15-08:30	A	154.14	154.14		
08:15-08:30	B	88.08	88.08		
08:15-08:30	C	177.26	177.26		
08:30-08:45	A	154.14	154.14		
08:30-08:45	B	88.08	88.08		
08:30-08:45	C	177.26	177.26		
08:45-09:00	A	125.86	125.86		
08:45-09:00	B	71.92	71.92		
08:45-09:00	C	144.74	144.74		
09:00-09:15	A	105.40	105.40		
09:00-09:15	B	60.23	60.23		
09:00-09:15	C	121.21	121.21		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	108.000	32.000
	B	77.000	0.000	3.000
	C	159.000	2.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.77	0.23
	B	0.96	0.00	0.04
	C	0.99	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	0.20	10.18	0.25	−1	B
C-AB	0.00	4.89	0.00	−1	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	60.23	59.62	0.00	454.35	0.133	0.15	9.107	A
C-AB	1.79	1.78	0.00	738.50	0.002	0.00	4.886	A
C-A	119.42	119.42	0.00	-	-	-	-	-
A-B	81.31	81.31	0.00	-	-	-	-	-
A-C	24.09	24.09	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	71.92	71.77	0.00	449.01	0.160	0.19	9.538	A
C-AB	2.21	2.21	0.00	748.21	0.003	0.00	4.825	A
C-A	142.53	142.53	0.00	-	-	-	-	-
A-B	97.09	97.09	0.00	-	-	-	-	-
A-C	28.77	28.77	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	88.08	87.85	0.00	441.63	0.199	0.25	10.170	B
C-AB	2.83	2.83	0.00	761.72	0.004	0.00	4.743	A
C-A	174.43	174.43	0.00	-	-	-	-	-
A-B	118.91	118.91	0.00	-	-	-	-	-
A-C	35.23	35.23	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	88.08	88.08	0.00	441.62	0.199	0.25	10.182	B
C-AB	2.83	2.83	0.00	761.72	0.004	0.00	4.743	A
C-A	174.43	174.43	0.00	-	-	-	-	-
A-B	118.91	118.91	0.00	-	-	-	-	-
A-C	35.23	35.23	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	71.92	72.14	0.00	449.01	0.160	0.19	9.559	A
C-AB	2.21	2.21	0.00	748.21	0.003	0.00	4.825	A
C-A	142.53	142.53	0.00	-	-	-	-	-
A-B	97.09	97.09	0.00	-	-	-	-	-
A-C	28.77	28.77	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	60.23	60.38	0.00	454.35	0.133	0.15	9.143	A
C-AB	1.79	1.79	0.00	738.50	0.002	0.00	4.886	A
C-A	119.42	119.42	0.00	-	-	-	-	-
A-B	81.31	81.31	0.00	-	-	-	-	-
A-C	24.09	24.09	0.00	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.15	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.19	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.25	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.25	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.19	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.15	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base, PM	2023 Base	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wylfa Access	T-Junction	Two-way	A,B,C	9.13	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	B5111 S		Major
B	B	Rhos Y Bol		Minor
C	C	B5111 N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.30		0.00		2.20	200.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.85								✓		15	5

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	477.729	0.082	0.207	0.131	0.296
1	B-C	617.667	0.089	0.226	-	-
1	C-B	689.785	0.252	0.252	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	260.00	100.000
B	ONE HOUR	✓	42.00	100.000
C	ONE HOUR	✓	91.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowinPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:30-16:45	A	195.74	195.74		
16:30-16:45	B	31.62	31.62		
16:30-16:45	C	68.51	68.51		
16:45-17:00	A	233.73	233.73		
16:45-17:00	B	37.76	37.76		
16:45-17:00	C	81.81	81.81		
17:00-17:15	A	286.27	286.27		
17:00-17:15	B	46.24	46.24		
17:00-17:15	C	100.19	100.19		
17:15-17:30	A	286.27	286.27		
17:15-17:30	B	46.24	46.24		
17:15-17:30	C	100.19	100.19		
17:30-17:45	A	233.73	233.73		
17:30-17:45	B	37.76	37.76		
17:30-17:45	C	81.81	81.81		
17:45-18:00	A	195.74	195.74		
17:45-18:00	B	31.62	31.62		
17:45-18:00	C	68.51	68.51		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

From	To: A	To: B	To: C
A	0.000	96.000	164.000
B	37.000	0.000	5.000
C	89.000	2.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

From	To: A	To: B	To: C
A	0.00	0.37	0.63
B	0.88	0.00	0.12
C	0.98	0.02	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

From	To: A	To: B	To: C
A	1.000	1.000	1.000
B	1.000	1.000	1.000
C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

From	To: A	To: B	To: C
A	0.0	0.0	0.0
B	0.0	0.0	0.0
C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	0.11	9.34	0.12	−1	A
C-AB	0.00	5.30	0.00	−1	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	31.62	31.32	0.00	450.44	0.070	0.07	8.583	A
C-AB	1.67	1.66	0.00	683.54	0.002	0.00	5.279	A
C-A	66.84	66.84	0.00	-	-	-	-	-
A-B	72.27	72.27	0.00	-	-	-	-	-
A-C	123.47	123.47	0.00	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	37.76	37.69	0.00	442.56	0.085	0.09	8.891	A
C-AB	2.03	2.03	0.00	682.72	0.003	0.00	5.288	A
C-A	79.77	79.77	0.00	-	-	-	-	-
A-B	86.30	86.30	0.00	-	-	-	-	-
A-C	147.43	147.43	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	46.24	46.14	0.00	431.66	0.107	0.12	9.336	A
C-AB	2.57	2.56	0.00	681.79	0.004	0.00	5.299	A
C-A	97.63	97.63	0.00	-	-	-	-	-
A-B	105.70	105.70	0.00	-	-	-	-	-
A-C	180.57	180.57	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	46.24	46.24	0.00	431.66	0.107	0.12	9.340	A
C-AB	2.57	2.57	0.00	681.80	0.004	0.00	5.301	A
C-A	97.63	97.63	0.00	-	-	-	-	-
A-B	105.70	105.70	0.00	-	-	-	-	-
A-C	180.57	180.57	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	37.76	37.86	0.00	442.56	0.085	0.09	8.897	A
C-AB	2.03	2.04	0.00	682.72	0.003	0.00	5.288	A
C-A	79.77	79.77	0.00	-	-	-	-	-
A-B	86.30	86.30	0.00	-	-	-	-	-
A-C	147.43	147.43	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	31.62	31.69	0.00	450.43	0.070	0.08	8.598	A
C-AB	1.67	1.67	0.00	683.54	0.002	0.00	5.279	A
C-A	66.84	66.84	0.00	-	-	-	-	-
A-B	72.27	72.27	0.00	-	-	-	-	-
A-C	123.47	123.47	0.00	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.07	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.12	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.12	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.09	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:45-18:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.08	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, AM	2023 Base + Dev	AM		ONE HOUR	07:45	09:15	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wylfa Access	T-Junction	Two-way	A,B,C	13.50	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	B5111 S		Major
B	B	Rhos Y Bol		Minor
C	C	B5111 N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.30		0.00		2.20	200.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.85								✓		15	5

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	477.729	0.082	0.207	0.131	0.296
1	B-C	617.667	0.089	0.226	-	-
1	C-B	689.785	0.252	0.252	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	205.00	100.000
B	ONE HOUR	✓	145.00	100.000
C	ONE HOUR	✓	161.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	A	154.33	154.33		
07:45-08:00	B	109.16	109.16		
07:45-08:00	C	121.21	121.21		
08:00-08:15	A	184.29	184.29		
08:00-08:15	B	130.35	130.35		
08:00-08:15	C	144.74	144.74		
08:15-08:30	A	225.71	225.71		
08:15-08:30	B	159.65	159.65		
08:15-08:30	C	177.26	177.26		
08:30-08:45	A	225.71	225.71		
08:30-08:45	B	159.65	159.65		
08:30-08:45	C	177.26	177.26		
08:45-09:00	A	184.29	184.29		
08:45-09:00	B	130.35	130.35		
08:45-09:00	C	144.74	144.74		
09:00-09:15	A	154.33	154.33		
09:00-09:15	B	109.16	109.16		
09:00-09:15	C	121.21	121.21		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	97.000	108.000
	B	142.000	0.000	3.000
	C	159.000	2.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.47	0.53
	B	0.98	0.00	0.02
	C	0.99	0.01	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	0.38	13.65	0.60	1.00	B
C-AB	0.00	4.97	0.00	−1	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Main Results for each time segment

Main results: (07:45-08:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	109.16	107.87	0.00	441.16	0.247	0.32	10.760	B
C-AB	1.79	1.78	0.00	726.97	0.002	0.00	4.963	A
C-A	119.42	119.42	0.00	-	-	-	-	-
A-B	73.03	73.03	0.00	-	-	-	-	-
A-C	81.31	81.31	0.00	-	-	-	-	-

Main results: (08:00-08:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	130.35	129.96	0.00	433.62	0.301	0.42	11.839	B
C-AB	2.22	2.22	0.00	734.64	0.003	0.00	4.914	A
C-A	142.52	142.52	0.00	-	-	-	-	-
A-B	87.20	87.20	0.00	-	-	-	-	-
A-C	97.09	97.09	0.00	-	-	-	-	-

Main results: (08:15-08:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	159.65	158.97	0.00	423.20	0.377	0.59	13.586	B
C-AB	2.85	2.85	0.00	745.42	0.004	0.00	4.847	A
C-A	174.42	174.42	0.00	-	-	-	-	-
A-B	106.80	106.80	0.00	-	-	-	-	-
A-C	118.91	118.91	0.00	-	-	-	-	-

Main results: (08:30-08:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	159.65	159.62	0.00	423.20	0.377	0.60	13.652	B
C-AB	2.85	2.85	0.00	745.42	0.004	0.00	4.849	A
C-A	174.41	174.41	0.00	-	-	-	-	-
A-B	106.80	106.80	0.00	-	-	-	-	-
A-C	118.91	118.91	0.00	-	-	-	-	-

Main results: (08:45-09:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	130.35	131.00	0.00	433.62	0.301	0.44	11.923	B
C-AB	2.22	2.22	0.00	734.64	0.003	0.00	4.916	A
C-A	142.52	142.52	0.00	-	-	-	-	-
A-B	87.20	87.20	0.00	-	-	-	-	-
A-C	97.09	97.09	0.00	-	-	-	-	-

Main results: (09:00-09:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	109.16	109.58	0.00	441.16	0.247	0.33	10.872	B
C-AB	1.80	1.80	0.00	726.98	0.002	0.00	4.965	A
C-A	119.41	119.41	0.00	-	-	-	-	-
A-B	73.03	73.03	0.00	-	-	-	-	-
A-C	81.31	81.31	0.00	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (07:45-08:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.32	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:00-08:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.42	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:15-08:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.59	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:30-08:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.60	0.00	0.00	0.00	1.00			N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (08:45-09:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.44	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (09:00-09:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.33	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

(Default Analysis Set) - 2023 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Locked	Network Flow Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A			100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Single Time Segment Only	Locked
2023 Base + Dev, PM	2023 Base + Dev	PM		ONE HOUR	16:30	18:00	90	15		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Junction Delay (s)	Junction LOS
1	Wylfa Access	T-Junction	Two-way	A,B,C	11.88	B

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	B5111 S		Major
B	B	Rhos Y Bol		Minor
C	C	B5111 N		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.30		0.00		2.20	200.00	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane	2.85								✓		15	5

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	477.729	0.082	0.207	0.131	0.296
1	B-C	617.667	0.089	0.226	-	-
1	C-B	689.785	0.252	0.252	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	325.00	100.000
B	ONE HOUR	✓	107.00	100.000
C	ONE HOUR	✓	91.00	100.000

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowinPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:30-16:45	A	244.68	244.68		
16:30-16:45	B	80.56	80.56		
16:30-16:45	C	68.51	68.51		
16:45-17:00	A	292.17	292.17		
16:45-17:00	B	96.19	96.19		
16:45-17:00	C	81.81	81.81		
17:00-17:15	A	357.83	357.83		
17:00-17:15	B	117.81	117.81		
17:00-17:15	C	100.19	100.19		
17:15-17:30	A	357.83	357.83		
17:15-17:30	B	117.81	117.81		
17:15-17:30	C	100.19	100.19		
17:30-17:45	A	292.17	292.17		
17:30-17:45	B	96.19	96.19		
17:30-17:45	C	81.81	81.81		
17:45-18:00	A	244.68	244.68		
17:45-18:00	B	80.56	80.56		
17:45-18:00	C	68.51	68.51		

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	161.000	164.000
	B	102.000	0.000	5.000
	C	89.000	2.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.50	0.50
	B	0.95	0.00	0.05
	C	0.98	0.02	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.0	0.0	0.0
	B	0.0	0.0	0.0
	C	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max 95th percentile Queue (PCU)	Max LOS
B-AC	0.28	12.01	0.39	−1	B
C-AB	0.00	5.44	0.00	−1	A
C-A	-	-	-	-	-
A-B	-	-	-	-	-
A-C	-	-	-	-	-

Main Results for each time segment

Main results: (16:30-16:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	80.56	79.67	0.00	438.13	0.184	0.22	10.020	B
C-AB	1.67	1.66	0.00	671.66	0.002	0.00	5.372	A
C-A	66.84	66.84	0.00	-	-	-	-	-
A-B	121.21	121.21	0.00	-	-	-	-	-
A-C	123.47	123.47	0.00	-	-	-	-	-

Main results: (16:45-17:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	96.19	95.94	0.00	429.44	0.224	0.28	10.787	B
C-AB	2.04	2.04	0.00	668.64	0.003	0.00	5.399	A
C-A	79.77	79.77	0.00	-	-	-	-	-
A-B	144.74	144.74	0.00	-	-	-	-	-
A-C	147.43	147.43	0.00	-	-	-	-	-

Main results: (17:00-17:15)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	117.81	117.40	0.00	417.44	0.282	0.39	11.981	B
C-AB	2.58	2.57	0.00	664.73	0.004	0.00	5.436	A
C-A	97.62	97.62	0.00	-	-	-	-	-
A-B	177.26	177.26	0.00	-	-	-	-	-
A-C	180.57	180.57	0.00	-	-	-	-	-

Main results: (17:15-17:30)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	117.81	117.80	0.00	417.44	0.282	0.39	12.014	B
C-AB	2.58	2.58	0.00	664.73	0.004	0.00	5.438	A
C-A	97.62	97.62	0.00	-	-	-	-	-
A-B	177.26	177.26	0.00	-	-	-	-	-
A-C	180.57	180.57	0.00	-	-	-	-	-

Main results: (17:30-17:45)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	96.19	96.58	0.00	429.44	0.224	0.29	10.827	B
C-AB	2.04	2.04	0.00	668.64	0.003	0.00	5.400	A
C-A	79.77	79.77	0.00	-	-	-	-	-
A-B	144.74	144.74	0.00	-	-	-	-	-
A-C	147.43	147.43	0.00	-	-	-	-	-

Main results: (17:45-18:00)

Stream	Total Demand (PCU/hr)	Entry Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	RFC	End Queue (PCU)	Delay (s)	LOS
B-AC	80.56	80.81	0.00	438.13	0.184	0.23	10.082	B
C-AB	1.67	1.67	0.00	671.66	0.002	0.00	5.372	A
C-A	66.84	66.84	0.00	-	-	-	-	-
A-B	121.21	121.21	0.00	-	-	-	-	-
A-C	123.47	123.47	0.00	-	-	-	-	-

Queue Variation Results for each time segment

Queue Variation results: (16:30-16:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.22	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (16:45-17:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.28	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:00-17:15)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.39	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:15-17:30)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.39	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:30-17:45)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.29	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

Queue Variation results: (17:45-18:00)

Stream	Mean (PCU)	Q05 (PCU)	Q50 (PCU)	Q90 (PCU)	Q95 (PCU)	Percentile Message	Marker Message	Probability Of Reaching Or Exceeding Marker	Probability Of Exactly Reaching Marker
B-AC	0.23	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-AB	0.00	−1	−1	−1	−1	Percentiles could not be calculated. This may be because the mean queue is very small or very big.		N/A	N/A
C-A	-	-	-	-	-	-	-	-	-
A-B	-	-	-	-	-	-	-	-	-
A-C	-	-	-	-	-	-	-	-	-

nationalgrid

North Wales Connection Project

Transport Assessment – ANNEX L

A55 J8A Modelling Report

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Final September 2018

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4.1	Illustration of queue lengths at Junction 8A of the A55

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1 Introduction

1.1 BACKGROUND

1.1.1 At the request of the Isle of Anglesey County Council (IACC) this technical note has been prepared to assess the existing operational capacity and efficiency of the Local Road Network (LRN) at Junction 8A of the A55 (J8A).

1.1.2 It should be noted that this junction is located along a link that has been designated as a contingency route and would only be used in the event of the primary route being unavailable for use.

1.1.3 This technical note adheres to the following structure:

- Junction Description;
- Modelling Methodology;
- Forecasting Results; and
- Summary and Recommendations

1.1.4 IACC have not requested consideration of the impacts on the Strategic Road Network (SRN) i.e. mainline A55. Therefore, this exercise does not consider the relationship between the A55 eastbound merge across the Britannia Bridge and the LRN.

1.1.5 Consequently, any effects on the LRN junction caused by the eastbound merge at the Britannia Bridge are not considered in either model, neither are effects such as blocking back along the A55 on-slip.

2 Junction Description

2.1 INTRODUCTION

2.1.1 J8A provides access from the A5 to the A55 for vehicles travelling eastbound and access to the A5 for vehicles travelling westbound along the A55.

2.1.2 The junction, illustrated with the Origin-Destination (OD) zones (A to C) in **Figure 2.1**, comprises of the following entry arms:

- A55 Off-slip (right);
- A55 Off-slip (left);
- A5 West; and
- A5 East.

Figure 2.1: Junction Diagram

2.1.3 Table 2.1 provides a description of each of the entry arms noting any specific features.

Table 2.1: Entry Arm Description

Entry Arm	Description
A5 West	A5 West allows ahead movements to the A5 east and a right turn onto the A55 on-slip. There is a provision for right turning vehicles with a right-turn bay and a kerbed central reserve, which is approximately 3.5m in width and has a storage capacity of 21 Passenger Car Units (PCUs). That equates to approximately 130m.
A5 East	A5 East allows ahead movements on to the A5 West and a left turn onto the A55 on-slip. The carriageway width is approximately 7.5m. The road forks out and provides a bay for left-turners joining the A55 on-slip. Vehicles at this location are required to give-way to right-turners from the west arm.
A55 Off-slip	Upon leaving the A55, the A55 forks into two lanes with provision for vehicles travelling t the A5 West (left) and A5 East (right). For left turns onto the A5 West, there is a merge lane running parallel to the A5. For right turning traffic there is a give-way junction and refuge island in the centre of the A5, with storage for 1 PCU (6m).

3 Data Collection

3.1 OVERVIEW

3.1.1 As specified in the North Wales Connection Transport Assessment Manual Classified Turning Count (MCTC) data was collected on a neutral weekday during February 2017 and covered the following peak hours:

- AM Peak: 07:00 – 10:00; and
- PM Peak: 16:00 – 19:00.

3.1.2 The peak hour within each period was identified and utilised as base data for assessing the junction.

3.2 COLLECTED DATA AND ADJUSTMENTS

3.2.1 For modelling purposes, the traffic count data was converted into Passenger Car Units (PCU) which factors all vehicles to generate a common value. The conversion factors used are listed in **Table 3.1**.

Table 3.1: PCU Conversion Factors

Vehicle Class	PCU Factor
Cars / LGVs	1.0
HGVs	2.3

3.2.2 Tables 3.2 and 3.3 present the AM and PM peak hours converted onto PCUs.

Table 3.2: 2017 AM Base O-D Matrix

		Destination			
	Zone	A	B	C	**Total**
Origin	A		696	84	**780**
	B	158		107	**265**
	C	293	137		**431**

Table 3.2: 2017 AM Base O-D Matrix					
Origin		Destination			
	Total	**452**	**834**	**191**	**1476**

Table 3.3: 2017 PM Base O-D Matrix					
Origin		Destination			
	Zone	A	B	C	**Total**
	A		208	238	**446**
	B	206		130	**336**
	C	159	66		**225**
	Total	**365**	**275**	**368**	**1008**

3.2.3 As per the methodology set out in the North Wales Connection (NWC) Transport Assessment (TA), the impact of seasonal variation in traffic volumes during the August period has been accounted for within this assessment.

3.2.4 In order to account for seasonality the following factors have been applied to the 2023 Base matrices:

- AM Peak: 0.9; and
- PM Peak: 1.49.

3.2.5 Tables 3.4 and 3.5 present the factored and adjusted base traffic flows for AM and PM Peak 2023 Base, respectively.

Table 3.4: 2023 AM Base O-D Matrix					
Origin		Destination			
	Zone	A	B	C	**Total**
	A		722	87	**809**
	B	164		111	**275**
	C	304	143		**447**
	Total	**469**	**865**	**198**	**1532**

Table 3.5: 2023 PM Base O-D Matrix					
Origin		Destination			
	Zone	A	B	C	**Total**
	A		216	247	**463**
	B	214		135	**349**
	C	165	69		**234**
	Total	**379**	**285**	**382**	**1046**

3.3 DEVELOPMENT TRAFFIC

3.3.1 Table 3.6 presents the traffic generated by the Proposed Development.

Table 3.6: AM and PM Peak Development O-D Matrix					
Origin		Destination			
	Zone	A	B	C	**Total**
	A		87	-	**87**
	B	87		-	**87**
	C	-	-		**-**
	Total	**87**	**87**	**-**	**174**

3.3.2 Tables 3.7 and 3.8 present the 2023 Base + Development for the AM and PM peak times, respectively.

Table 3.7: 2023 AM Base + Development O-D Matrix					
Origin		Destination			
	Zone	A	B	C	**Total**
	A		809	87	**896**
	B	251		111	**362**

Table 3.7: 2023 AM Base + Development O-D Matrix					
Origin		Destination			
	C	304	143		**447**
	Total	**556**	**952**	**198**	**1705**

Table 3.7: 2023 AM Base + Development O-D Matrix					
Origin		Destination			
	Zone	A	B	C	**Total**
	A		303	247	**550**
	B	301		135	**436**
	C	165	69		**234**
	Total	**466**	**378**	**388**	**1219**

4 Traffic Modelling

4.1 METHODOLOGY

4.1.1 The PICADY module within Junctions 8, the industry standard software package used to assess capacity at standard major/minor priority junctions, was used to assess the junction.

4.1.2 OS mapping was obtained for the junction and the necessary geometric parameters for each arm and the OD data presented in the preceding section were input into the PICADY model.

4.1.3 Following best practise the outputs from the PICADY model were analysed and site visits were undertaken to assess the validity of the model for assessing the junction in future years.

4.1.4 The outputs from PICADY did not replicate the observations of traffic conditions during site visits.

4.1.5 The PICADY model was forecasting a significantly larger queue for right turning vehicles from the A5 onto the On-Slip than observed.

4.1.6 The reason for the differences between the observations and modelled outputs as highlighted in the **Table 2.1**, is that the junction comprises of several unique, non-standard features. As a result the parameters in PICADY are not suitable for the assessment of the junction in future years.

4.1.7 In order to provide a better tool for the assessment of the junction an alternative model was produced within LinSig v3.

4.1.8 Typically LinSig V3 is used to assess traffic signal junctions. However, it is possible to construct a complex network which assesses priority movements within the software.

4.1.9 This functionality allowed the junction to be modelled as a small network which provided a better replication of the non-standard junction compared to PICADY.

4.1.10 The results of both modelling exercises are presented over the following sections.

4.2 PICADY MODEL ASSESSMENT

4.2.1 The PICADY model outputs for the 2017 AM base matrix, capturing the right turn from the A5 onto the A55 on-slip are presented in **Table 10**.

4.2.2 This scenario was selected, as the right turn demand during this period was at its highest.

Table 4.1: Junction 8 Results for A5 Right Turn (2017 AM)

Time Period	Arm	RFC	Max Queue (PCU)
AM Peak	A5 West (right turn)	1.10	45.28

4.2.3 The turning movement is forecasted to operate above theoretical (0.85) and absolute capacity (1.00) at a Ratio of Flow to Capacity (RFC) of 1.10 and Maximum Queue (Max Queue) of 45.28.

4.2.4 Observations on-site suggested this may not be accurate. Therefore, further validation checks, comparing queue lengths between observed and as forecasted in PICADY were completed; these are presented in **Table 4.2**.

Table 4.2: Junction 8 Queue Appraisal Results (PCU)

Time Period	Arm	Observed Max Queue (PCU)	Max Queue (PCU)
08:00 – 08:30	A5 West (right turn)	4	45.28
08:30 – 09:00		23	

4.2.5 As presented in **Table 4.2**, modelled Max Queues are significantly higher than the observed Max Queues for the right turn from the A5 west.

4.2.6 As a result of the significant differences between the observed and modelled outputs further analysis to understand the suitability of the PICADY model and determine if the high RFC value was due to the opposing flow along the A5 east or a product of the calculated capacity within PICADY imposed by the geometry was completed.

4.2.7 To inform this work the opposing flow on the A5 east arm was set to zero; the results are presented in **Table 4.3**.

Table 4.3: Junction 8 geometric delay (opposing flow 0) 2017 Base			
Time Period	Arm	RFC	Max Queue (PCU)
AM Peak	A5 West (right turn)	1.04	22.38

4.2.8 As presented in **Table 4.3**, PICADY forecasts capacity issues at this junction without any opposing traffic. This highlights that in PICADY the geometric delay has the greatest bearing on capacity at this arm.

4.2.9 Although PICADY is an excellent tool to model standard junctions, it has been confirmed that the increased provision for right turners at this location could not be replicated in the model and it was not considered appropriate to use PICADY to undertake this analysis.

4.3 LINSIG MODEL APPRAISAL

4.3.1 In order to better replicate the junction, it was coded within LinSig and the maximum saturation flows recommended for non-signalised tuning movements by Transport Research Laboratory (TRL) were used for each individual traffic stream.

4.3.2 To validate the LinSig outputs, they were compared with the observed data from the site audits as presented in **Table 4.4**.

Table 4.4: LinSig Queue Appraisal Results (PCU)			
Time Period	Arm	Observed Max Queue (PCU)	Mean Max Queue – MMQ (PCU)
08:00 – 08:30	A5 West (right turn)	4	5.6
08:30 – 09:00		23	

4.3.3 **Table 4.4** identifies the outputs from the LinSig model and illustrates a greater degree of similarity to the conditions observed on site between 08:00 and 08:30.

4.3.4 Following this period the queues observed on site increased as a result of blocking back along the A55 on-slip due to the congested mainline flow at merge. This is illustrated in **Figure 4.1**.

4.3.5

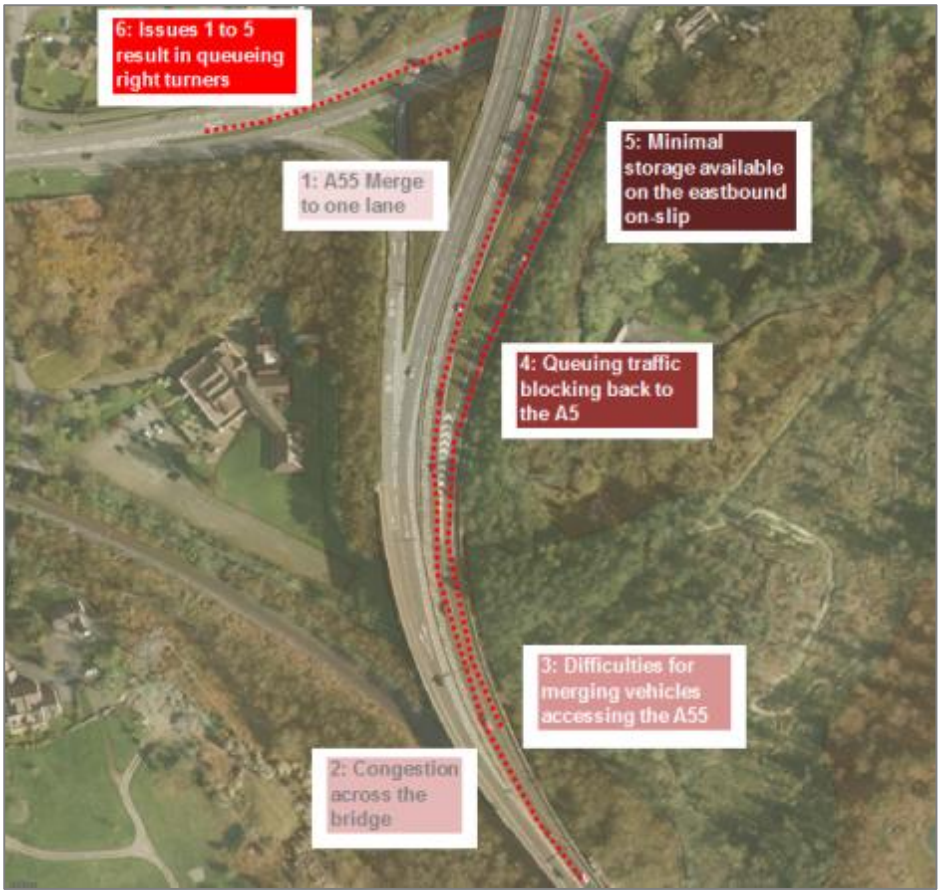

Figure 4.1 Illustration of queue lengths at Junction 8A of the A55

4.3.6 At the Britannia Bridge, two lanes merge in an eastbound direction prior to A55 J8A. This causes congestion at the J8A merge, making it difficult for traffic to merge onto the A55 from the on-slip.

4.3.7 Queues of 42 PCU (250m) were observed along the eastbound on-slip, blocking back to the A5.

4.3.8 This impacted on right turning vehicles from the A5, resulting in vehicles waiting at the right turn give way until storage became available on the on-slip.

4.3.9 This caused a queue to form in the right turn bay which peaked at approximately 23 PCU (140m), between 08:30 and 08:45.

4.3.10 As the A55 mainline flow improved and the merge from the A55 eastbound on-slip began operating more efficiently, the eastbound on-slip began to clear which improved the flow of right turners at the give way line.

4.3.11 The issue is not considered to be the operation of the LRN junction, but the reduction in link capacity due to the lane merge on the A55 across the Britannia Bridge coupled with peak hour demand.

4.3.12 Observations on-site suggest that if the slipway was clear then the observed queues at the right turn lane would be significantly reduced.

5 Forecasting Results

5.1 INTRODUCTION

5.1.1 The forecasting results from the LinSig model are presented in **Table 5.1** for the following scenarios:

- 2017 Base (AM and PM);
- 2023 Base (AM and PM);
- 2023 Base + Development (AM and PM);
- 2023 Base + Seasonality (AM and PM); and
- 2023 Base + Seasonality + Development (AM and PM).

5.1.2 The full results from the LinSig model can be seen in Appendix A.

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Table 5.1: LinSig V3 results for A55 J8A (All Scenarios)

Arm	Time Period	2017 Base		2023Base		2023 Base + Development		2023 Base + Seasonality		2023 Base + Seasonality + Development	
		DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)
A5 West (Ahead)	AM	9.1	0.0	9.4	0.1	9.4	0.1	9.1	0.0	9.1	0.0
	PM	17.5	0.1	18.1	0.1	18.1	0.1	27.0	0.2	27.0	0.2
A5 West (Right)	AM	93.1	5.6	97.1	9.1	108.8	>22	92.7	5.3	104.3	>22
	PM	26.2	0.2	27.3	0.2	38.2	0.3	42.2	0.4	53.5	0.6
A5 East (Ahead)	AM	20.9	0.1	21.7	0.1	21.7	0.1	20.8	0.1	20.8	0.1
	PM	10.9	0.1	11.3	0.1	11.3	0.1	16.9	0.1	16.9	0.1
A5 East (Left)	AM	24.4	0.2	25.5	0.2	25.8	0.2	24.2	0.2	24.7	0.2
	PM	9.9	0.1	10.3	0.1	10.6	0.1	16.0	0.1	16.5	0.1
A55 Off-slip (A5 w/b Merge)	AM	24.3	0.2	25.3	0.2	38.7	0.3	24.1	0.2	37.5	0.3
	PM	30.3	0.2	31.5	0.2	44.4	0.4	48.3	0.5	61.4	0.8
A55 Off-slip (A5 e/b right turn)	AM	20.0	0.1	20.8	0.1	20.8	0.1	20.0	0.1	20.0	0.1
	PM	23.0	0.1	24.0	0.2	24.0	0.2	36.8	0.3	36.8	0.3

6 Summary and Recommendations

5.2 RESULTS SUMMARY

5.2.1 Capacity issues are forecast in the AM peak for all scenarios for the right turn from the A5 west onto the A55 On-slip.

5.2.2 The remaining arms operate with a reserve capacity in both peak periods for all scenarios.

5.2.3 As a result of significant blocking back from the A55 eastbound merge, shown in **Figure 4.1** and because this exercise has not assessed the impact of this, the modelled outputs likely to understate the impact on the right turn due to blocking back along the A55 eastbound on-slip during the AM peak.

5.2.4 It is forecast that, the increase in traffic volume as a consequence of the Proposed Development, could exacerbate these issues.

5.2.5 Secondary assessment, as described in the NWC TA, has not been considered at this location given that capacity issues are forecast in the 2017 AM base and observed on-site. Instead, as with other junctions that experience existing capacity issues as described in the NWC TA, mitigation measures are recommended for this junction.

6.1 SUMMARY

6.1.1 At the request of IACC a modelling exercise has been undertaken to understand the operation of A55 J8A and quantify the potential impacts of the proposed NWC development.

6.1.2 The traffic data collected in February 2017 was converted into PCUs and presented as O-D matrices for each scenario and time period. Seasonality impacts, as a result of leisure traffic, have been accounted for.

6.1.3 The analysis completed as part of these works highlighted, as a result of the non-standard features of the junction, the PICADY module of Junctions 8 was not suitable for assessing A55 J8A.

6.1.4 It was considered that LinSig V3 provides a better platform to assess A55 J8A.

6.1.5 The modelled outputs were validated on-site and comparison between the forecast and observed queues in the 2017 AM Peak base model were made.

6.1.6 The similarities between the observed and modelled queues between 08:00 and 08:30 have been identified. However, on-site observations highlighted significant differences in observed and modelled queues between 08:30 and 09:00.

6.1.7 The differences between observed and modelled queues are not related to the capacity of the LRN junction but the reduced capacity of the A55 eastbound across the Britannia Bridge due to the lane merge on approach to the bridge.

6.1.8 During the AM peak demand along the A55 was observed to be significant and vehicles merging from the eastbound on-slip from J8A were delayed.

6.1.9 This caused blocking back along the slip road and its storage capacity was reached, thus preventing right turning vehicles from accessing the slip road and subsequently waiting at the give way causing queuing.

6.1.10 Although the impact of blocking back along the A55 on-slip during the AM peak hour was not captured, the results forecast capacity issues at the A5 west for right turning vehicles in all scenarios.

6.1.11 The remaining arms operated with sufficient reserve capacity (DoS<90%) in all scenarios and time periods.

6.2 RECOMMENDATIONS

6.2.1 It is recommended that vehicle movements associated with the Proposed Development are restricted in an eastbound direction at J8A during the AM peak throughout the construction period to avoid exacerbating existing problems with queuing traffic blocking back onto the LRN.

6.2.2 It is not recommended that these restrictions are enforced during the PM peak, as the junction is forecast to operate with no capacity problems as a result of the Proposed Development. Furthermore, existing queues observed in the AM peak do not occur during the PM peak.

6.2.3 It should also be noted that the junction lies on a contingency construction route. Therefore it will only be used in the event that the primary construction route is unavailable.

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Appendix A – Linsig Model Outputs

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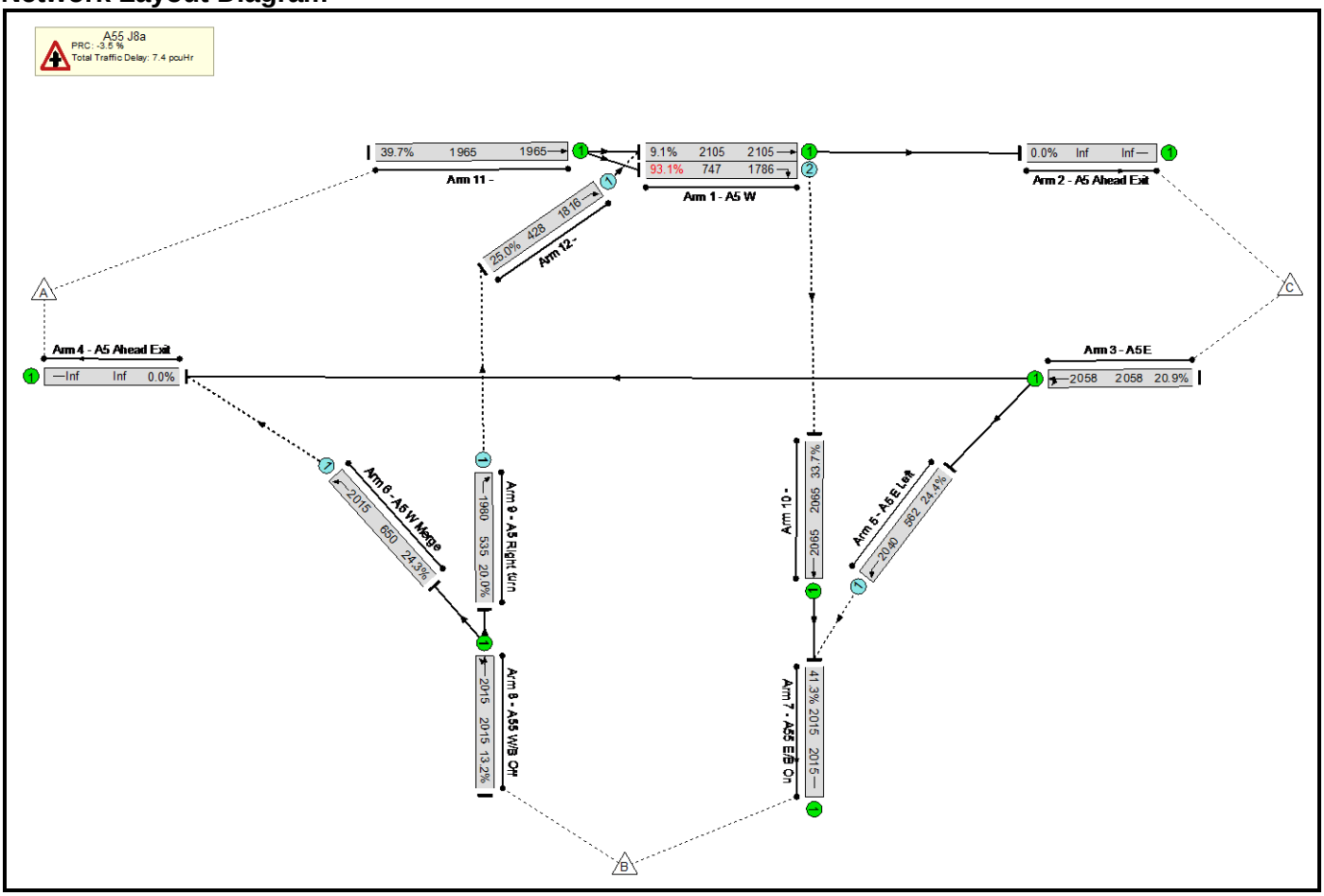
Basic Results Summary

User and Project Details

Project:	**North Wales Connection**
Title:	**A55 J8a Model**
Location:	
Client:	National Grid
Date Started:	19/10/2017
Checked By:	AJ
Additional detail:	
File name:	A55 J8a.lsg3x
Author:	
Company:	AECOM
Address:	Liverpool L2 2ET

Scenario 1: '2017 AM Base' (FG1: '2017 AM Base', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

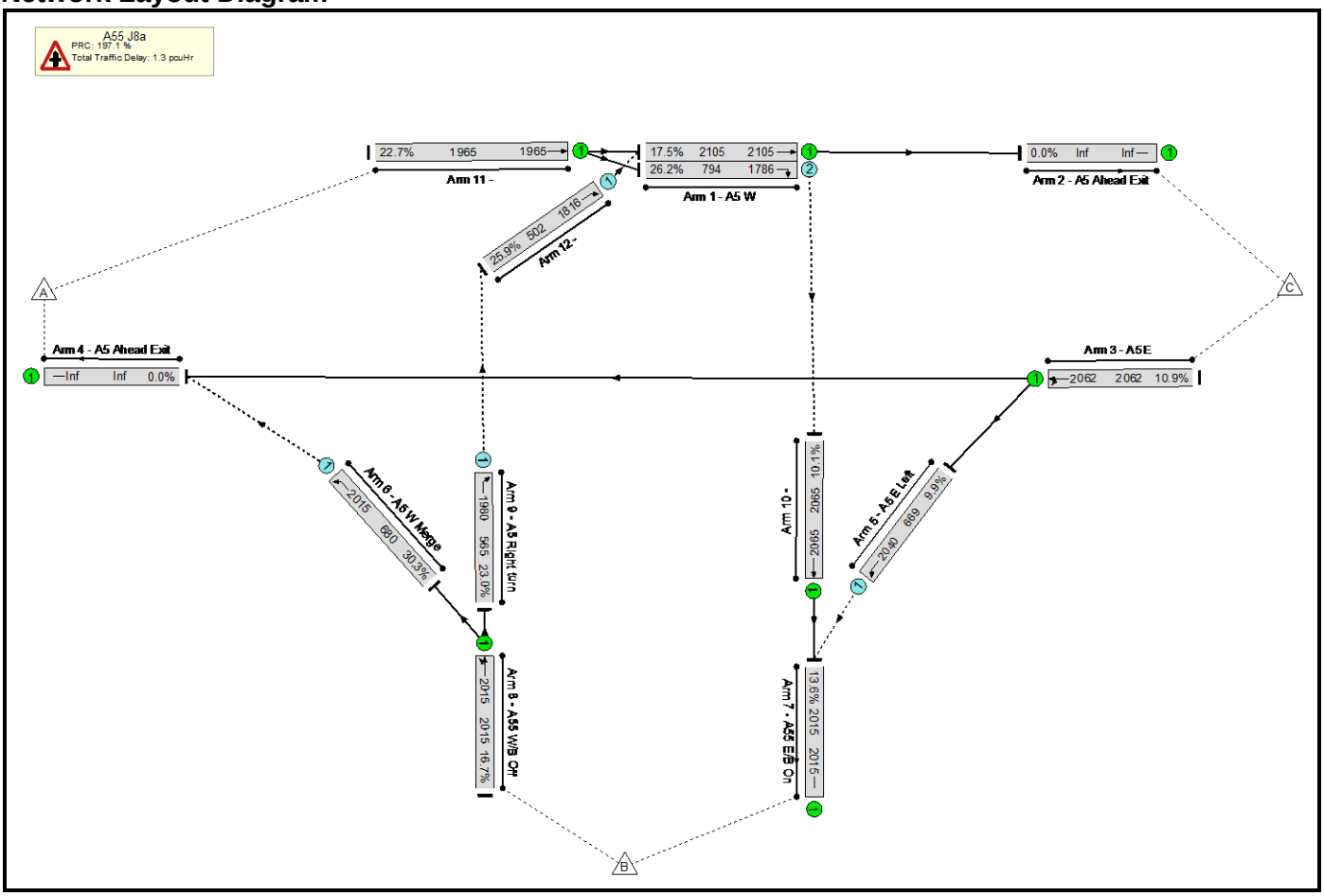
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A55 J8a Model	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**93.1%**	**1205**	**0**	**0**	**7.4**	**-**	**-**
A55 J8a	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**93.1%**	**1205**	**0**	**0**	**7.4**	**-**	**-**
1/1	A5 W Ahead	U	-		-	-	-	191	2105	2105	9.1%	-	-	-	0.0	0.9	0.0
1/2	A5 W Right	O	-		-	-	-	696	1786	747	93.1%	696	0	0	5.6	28.8	5.6
3/1	A5 E Ahead Left	U	-		-	-	-	430	2058	2058	20.9%	-	-	-	0.1	1.1	0.1
5/1	A5 E Left Ahead	O	-		-	-	-	137	2040	562	24.4%	137	0	0	0.2	4.2	0.2
6/1	A5 W Merge Left	O	-		-	-	-	158	2015	650	24.3%	158	0	0	0.2	3.7	0.2
7/1	A55 E/B On	U	-		-	-	-	833	2015	2015	41.3%	-	-	-	0.4	1.5	0.4
8/1	A55 W/B Off Ahead Ahead2	U	-		-	-	-	265	2015	2015	13.2%	-	-	-	0.1	1.0	0.1
9/1	A5 Right turn Right	O	-		-	-	-	107	1980	535	20.0%	107	0	0	0.1	4.2	0.1
10/1	Ahead	U	-		-	-	-	696	2065	2065	33.7%	-	-	-	0.3	1.3	0.3
11/1	Ahead	U	-		-	-	-	780	1965	1965	39.7%	-	-	-	0.3	1.5	0.3
12/1	Ahead	O	-		-	-	-	107	1816	428	25.0%	107	0	0	0.2	5.6	0.2

C1 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 0.00 Cycle Time (s): 3600
PRC Over All Lanes (%): -3.5 Total Delay Over All Lanes(pcuHr): 7.37

Basic Results Summary

Scenario 2: '2017 PM Base' (FG2: '2017 PM Base', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

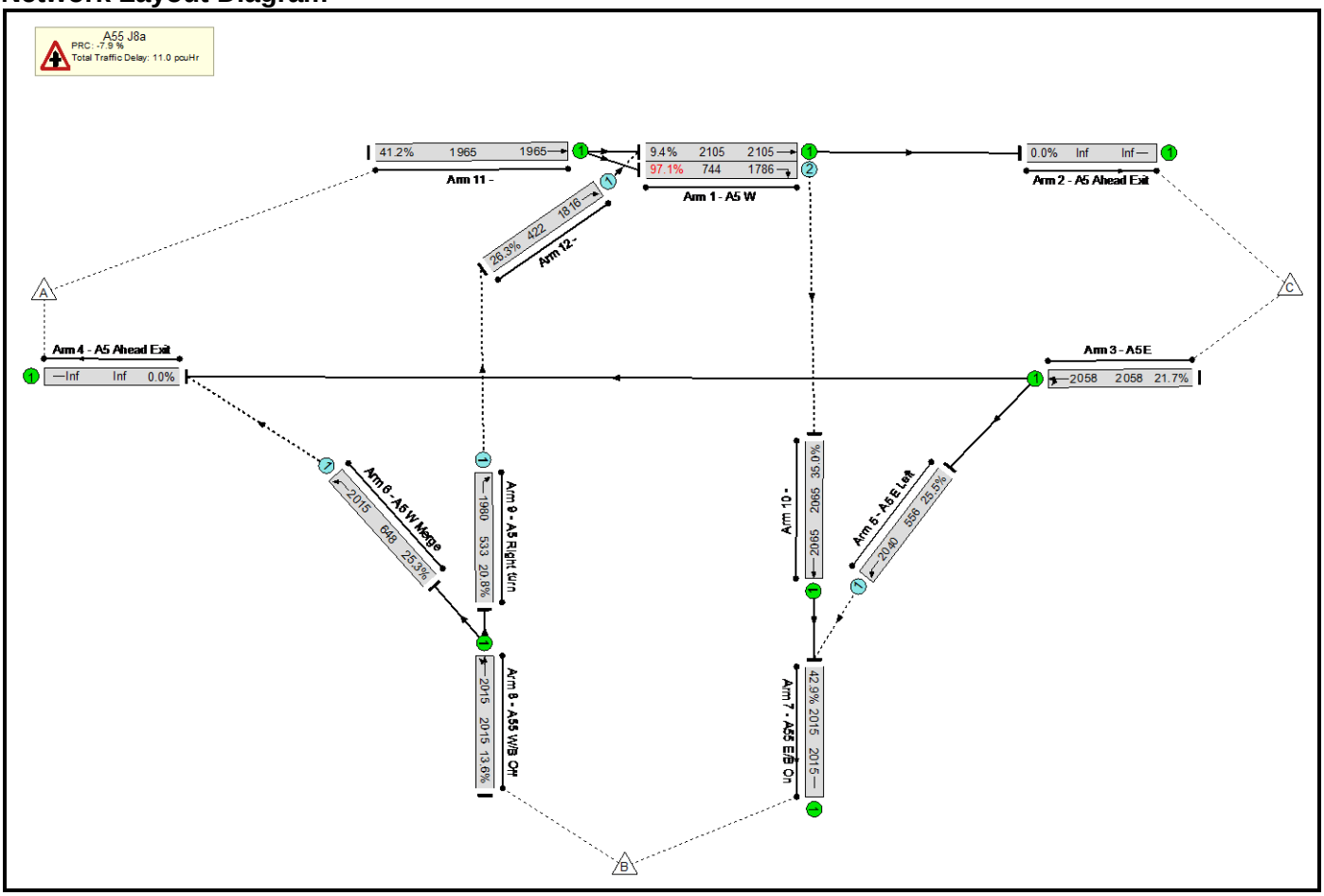
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A55 J8a Model	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**30.3%**	**740**	**0**	**0**	**1.3**	**-**	**-**
A55 J8a	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**30.3%**	**740**	**0**	**0**	**1.3**	**-**	**-**
1/1	A5 W Ahead	U	-		-	-	-	368	2105	2105	17.5%	-	-	-	0.1	1.0	0.1
1/2	A5 W Right	O	-		-	-	-	208	1786	794	26.2%	208	0	0	0.2	3.1	0.2
3/1	A5 E Ahead Left	U	-		-	-	-	225	2062	2062	10.9%	-	-	-	0.1	1.0	0.1
5/1	A5 E Left Ahead	O	-		-	-	-	66	2040	669	9.9%	66	0	0	0.1	3.0	0.1
6/1	A5 W Merge Left	O	-		-	-	-	206	2015	680	30.3%	206	0	0	0.2	3.8	0.2
7/1	A55 E/B On	U	-		-	-	-	274	2015	2015	13.6%	-	-	-	0.1	1.0	0.1
8/1	A55 W/B Off Ahead Ahead2	U	-		-	-	-	336	2015	2015	16.7%	-	-	-	0.1	1.1	0.1
9/1	A5 Right turn Right	O	-		-	-	-	130	1980	565	23.0%	130	0	0	0.1	4.1	0.1
10/1	Ahead	U	-		-	-	-	208	2065	2065	10.1%	-	-	-	0.1	1.0	0.1
11/1	Ahead	U	-		-	-	-	446	1965	1965	22.7%	-	-	-	0.1	1.2	0.1
12/1	Ahead	O	-		-	-	-	130	1816	502	25.9%	130	0	0	0.2	4.8	0.2

C1 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 0.00 Cycle Time (s): 3600
PRC Over All Lanes (%): 197.1 Total Delay Over All Lanes(pcuHr): 1.32

Basic Results Summary

Scenario 3: '2023 AM Base' (FG3: '2023 AM Base ', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

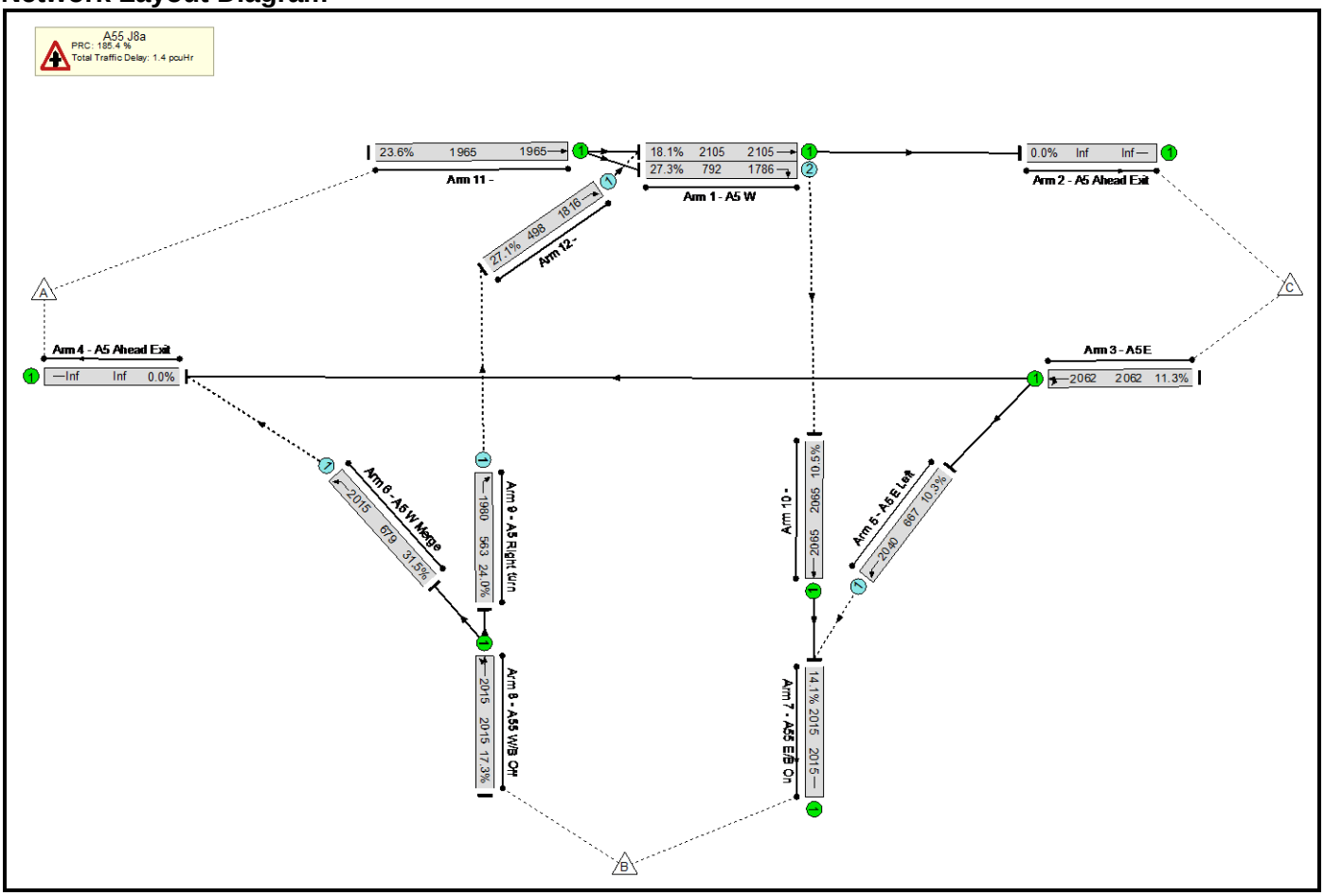
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A55 J8a Model	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**97.1%**	**1250**	**0**	**0**	**11.0**	**-**	**-**
A55 J8a	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**97.1%**	**1250**	**0**	**0**	**11.0**	**-**	**-**
1/1	A5 W Ahead	U	-		-	-	-	198	2105	2105	9.4%	-	-	-	0.1	0.9	0.1
1/2	A5 W Right	O	-		-	-	-	722	1786	744	97.1%	722	0	0	9.1	45.3	9.1
3/1	A5 E Ahead Left	U	-		-	-	-	446	2058	2058	21.7%	-	-	-	0.1	1.1	0.1
5/1	A5 E Left Ahead	O	-		-	-	-	142	2040	556	25.5%	142	0	0	0.2	4.3	0.2
6/1	A5 W Merge Left	O	-		-	-	-	164	2015	648	25.3%	164	0	0	0.2	3.7	0.2
7/1	A55 E/B On	U	-		-	-	-	864	2015	2015	42.9%	-	-	-	0.4	1.6	0.4
8/1	A55 W/B Off Ahead Ahead2	U	-		-	-	-	275	2015	2015	13.6%	-	-	-	0.1	1.0	0.1
9/1	A5 Right turn Right	O	-		-	-	-	111	1980	533	20.8%	111	0	0	0.1	4.3	0.1
10/1	Ahead	U	-		-	-	-	722	2065	2065	35.0%	-	-	-	0.3	1.3	0.3
11/1	Ahead	U	-		-	-	-	809	1965	1965	41.2%	-	-	-	0.3	1.6	0.3
12/1	Ahead	O	-		-	-	-	111	1816	422	26.3%	111	0	0	0.2	5.8	0.2

C1 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 0.00 Cycle Time (s): 3600
PRC Over All Lanes (%): -7.9 Total Delay Over All Lanes(pcuHr): 11.00

Basic Results Summary

Scenario 4: '2023 PM Base' (FG4: '2023 PM Base ', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

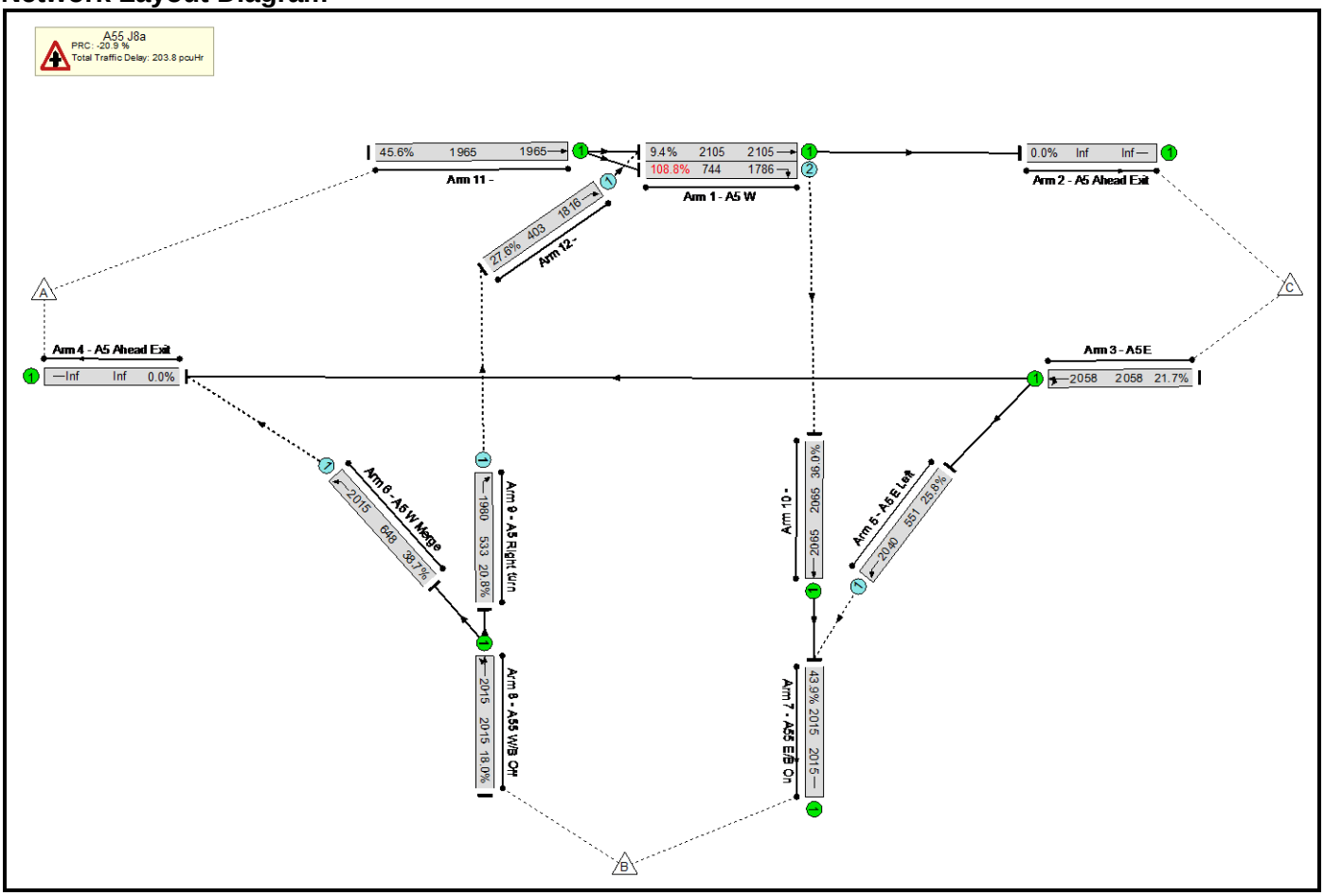
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A55 J8a Model	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**31.5%**	**769**	**0**	**0**	**1.4**	**-**	**-**
A55 J8a	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**31.5%**	**769**	**0**	**0**	**1.4**	**-**	**-**
1/1	A5 W Ahead	U	-		-	-	-	382	2105	2105	18.1%	-	-	-	0.1	1.0	0.1
1/2	A5 W Right	O	-		-	-	-	216	1786	792	27.3%	216	0	0	0.2	3.1	0.2
3/1	A5 E Ahead Left	U	-		-	-	-	234	2062	2062	11.3%	-	-	-	0.1	1.0	0.1
5/1	A5 E Left Ahead	O	-		-	-	-	69	2040	667	10.3%	69	0	0	0.1	3.0	0.1
6/1	A5 W Merge Left	O	-		-	-	-	214	2015	679	31.5%	214	0	0	0.2	3.9	0.2
7/1	A55 E/B On	U	-		-	-	-	285	2015	2015	14.1%	-	-	-	0.1	1.0	0.1
8/1	A55 W/B Off Ahead Ahead2	U	-		-	-	-	349	2015	2015	17.3%	-	-	-	0.1	1.1	0.1
9/1	A5 Right turn Right	O	-		-	-	-	135	1980	563	24.0%	135	0	0	0.2	4.2	0.2
10/1	Ahead	U	-		-	-	-	216	2065	2065	10.5%	-	-	-	0.1	1.0	0.1
11/1	Ahead	U	-		-	-	-	463	1965	1965	23.6%	-	-	-	0.2	1.2	0.2
12/1	Ahead	O	-		-	-	-	135	1816	498	27.1%	135	0	0	0.2	5.0	0.2

C1 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 0.00 Cycle Time (s): 3600
PRC Over All Lanes (%): 185.4 Total Delay Over All Lanes(pcuHr): 1.39

Basic Results Summary

Scenario 5: '2023 AM Base + Development' (FG6: '2023 AM Base + Development', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

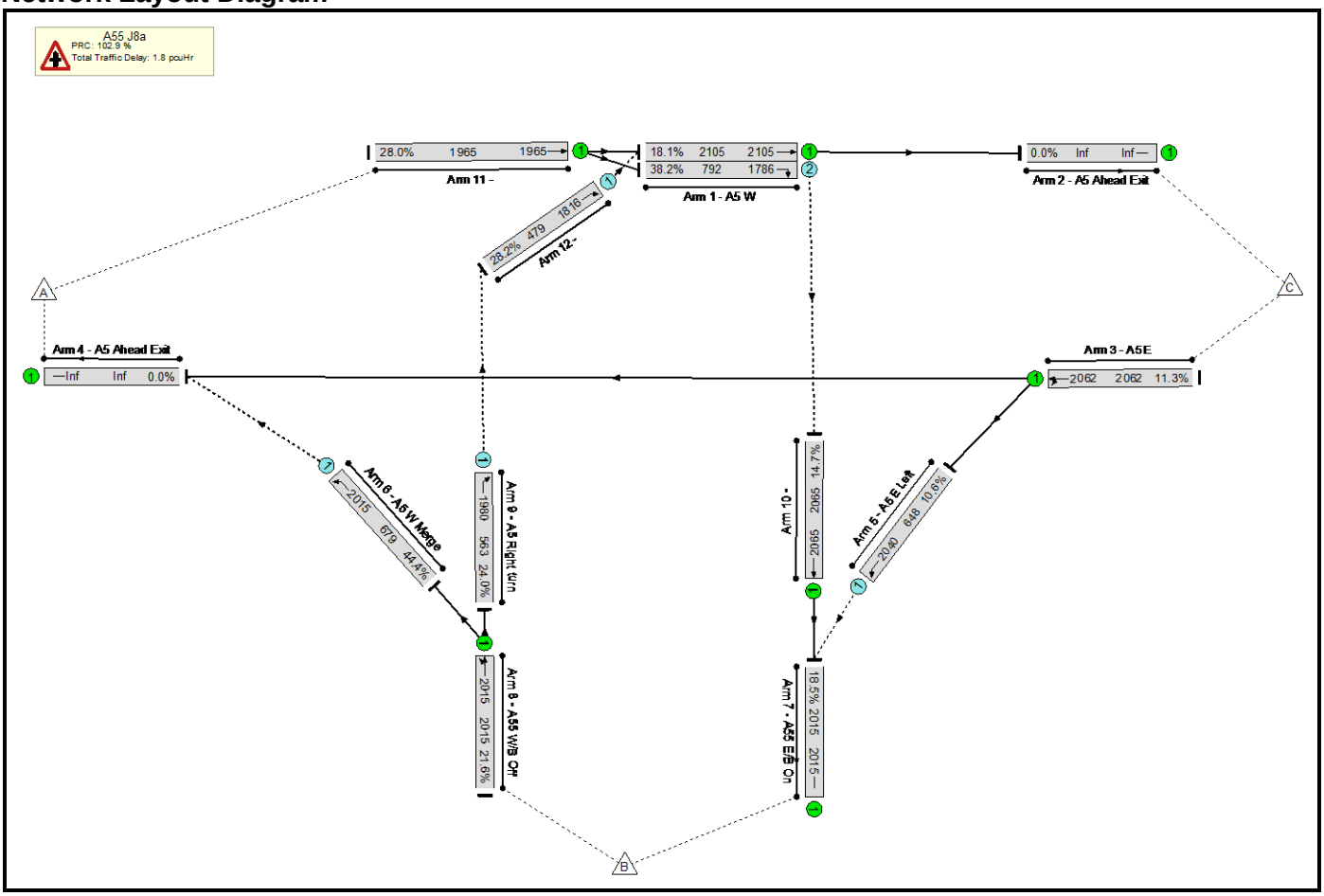
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A55 J8a Model	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**108.8%**	**1359**	**0**	**0**	**203.8**	**-**	**-**
A55 J8a	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**108.8%**	**1359**	**0**	**0**	**203.8**	**-**	**-**
1/1	A5 W Ahead	U	-		-	-	-	198	2105	2105	9.4%	-	-	-	0.1	0.9	0.1
1/2	A5 W Right	O	-		-	-	-	809	1786	744	108.8%	744	0	0	201.6	897.3	2465.0
3/1	A5 E Ahead Left	U	-		-	-	-	446	2058	2058	21.7%	-	-	-	0.1	1.1	0.1
5/1	A5 E Left Ahead	O	-		-	-	-	142	2040	551	25.8%	142	0	0	0.2	4.4	0.2
6/1	A5 W Merge Left	O	-		-	-	-	251	2015	648	38.7%	251	0	0	0.3	4.5	0.3
7/1	A55 E/B On	U	-		-	-	-	951	2015	2015	43.9%	-	-	-	0.4	1.6	0.4
8/1	A55 W/B Off Ahead Ahead2	U	-		-	-	-	362	2015	2015	18.0%	-	-	-	0.1	1.1	0.1
9/1	A5 Right turn Right	O	-		-	-	-	111	1980	533	20.8%	111	0	0	0.1	4.3	0.1
10/1	Ahead	U	-		-	-	-	809	2065	2065	36.0%	-	-	-	0.3	1.4	0.3
11/1	Ahead	U	-		-	-	-	896	1965	1965	45.6%	-	-	-	0.4	1.7	0.4
12/1	Ahead	O	-		-	-	-	111	1816	403	27.6%	111	0	0	0.2	6.2	0.2

C1 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 0.00 Cycle Time (s): 3600
PRC Over All Lanes (%): -20.9 Total Delay Over All Lanes(pcuHr): 203.85

Basic Results Summary

Scenario 6: '2023 PM Base + Development' (FG7: '2023 PM Base + Development', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

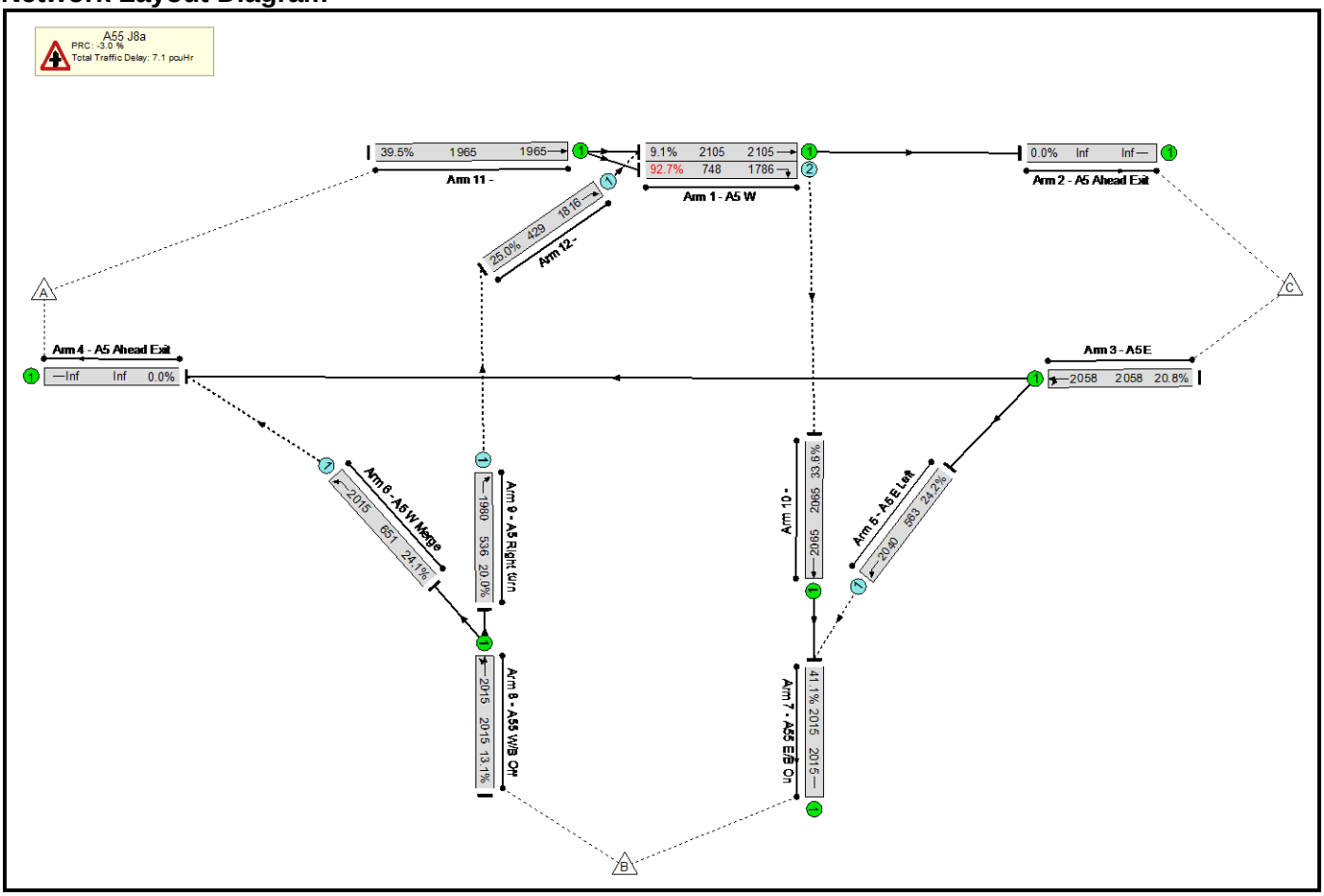
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A55 J8a Model	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**44.4%**	**943**	**0**	**0**	**1.8**	**-**	**-**
A55 J8a	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**44.4%**	**943**	**0**	**0**	**1.8**	**-**	**-**
1/1	A5 W Ahead	U	-		-	-	-	382	2105	2105	18.1%	-	-	-	0.1	1.0	0.1
1/2	A5 W Right	O	-		-	-	-	303	1786	792	38.2%	303	0	0	0.3	3.7	0.3
3/1	A5 E Ahead Left	U	-		-	-	-	234	2062	2062	11.3%	-	-	-	0.1	1.0	0.1
5/1	A5 E Left Ahead	O	-		-	-	-	69	2040	648	10.6%	69	0	0	0.1	3.1	0.1
6/1	A5 W Merge Left	O	-		-	-	-	301	2015	679	44.4%	301	0	0	0.4	4.8	0.4
7/1	A55 E/B On	U	-		-	-	-	372	2015	2015	18.5%	-	-	-	0.1	1.1	0.1
8/1	A55 W/B Off Ahead Ahead2	U	-		-	-	-	436	2015	2015	21.6%	-	-	-	0.1	1.1	0.1
9/1	A5 Right turn Right	O	-		-	-	-	135	1980	563	24.0%	135	0	0	0.2	4.2	0.2
10/1	Ahead	U	-		-	-	-	303	2065	2065	14.7%	-	-	-	0.1	1.0	0.1
11/1	Ahead	U	-		-	-	-	550	1965	1965	28.0%	-	-	-	0.2	1.3	0.2
12/1	Ahead	O	-		-	-	-	135	1816	479	28.2%	135	0	0	0.2	5.2	0.2

C1 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 0.00 Cycle Time (s): 3600
PRC Over All Lanes (%): 102.9 Total Delay Over All Lanes(pcuHr): 1.83

Basic Results Summary

Scenario 7: '2023 AM Base + Seasonality' (FG8: '2023 AM Base + Seasonality', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

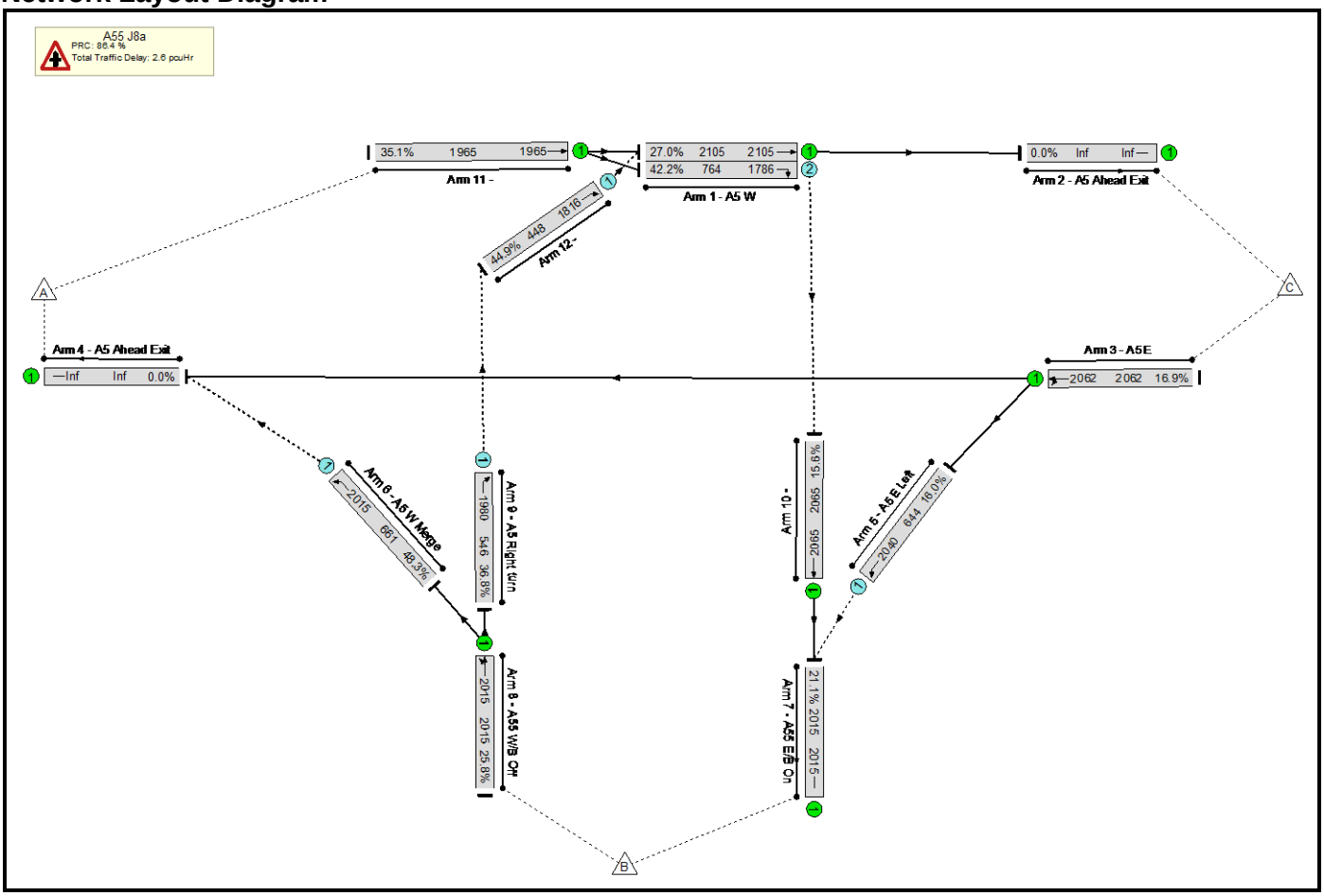
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A55 J8a Model	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**92.7%**	**1200**	**0**	**0**	**7.1**	**-**	**-**
A55 J8a	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**92.7%**	**1200**	**0**	**0**	**7.1**	**-**	**-**
1/1	A5 W Ahead	U	-		-	-	-	191	2105	2105	9.1%	-	-	-	0.0	0.9	0.0
1/2	A5 W Right	O	-		-	-	-	693	1786	748	92.7%	693	0	0	5.3	27.5	5.3
3/1	A5 E Ahead Left	U	-		-	-	-	428	2058	2058	20.8%	-	-	-	0.1	1.1	0.1
5/1	A5 E Left Ahead	O	-		-	-	-	136	2040	563	24.2%	136	0	0	0.2	4.2	0.2
6/1	A5 W Merge Left	O	-		-	-	-	157	2015	651	24.1%	157	0	0	0.2	3.6	0.2
7/1	A55 E/B On	U	-		-	-	-	829	2015	2015	41.1%	-	-	-	0.3	1.5	0.3
8/1	A55 W/B Off Ahead Ahead2	U	-		-	-	-	264	2015	2015	13.1%	-	-	-	0.1	1.0	0.1
9/1	A5 Right turn Right	O	-		-	-	-	107	1980	536	20.0%	107	0	0	0.1	4.2	0.1
10/1	Ahead	U	-		-	-	-	693	2065	2065	33.6%	-	-	-	0.3	1.3	0.3
11/1	Ahead	U	-		-	-	-	777	1965	1965	39.5%	-	-	-	0.3	1.5	0.3
12/1	Ahead	O	-		-	-	-	107	1816	429	25.0%	107	0	0	0.2	5.6	0.2

C1 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 0.00 Cycle Time (s): 3600
PRC Over All Lanes (%): -3.0 Total Delay Over All Lanes(pcuHr): 7.10

Basic Results Summary

Scenario 8: '2023 PM Base + Seasonality' (FG9: '2023 PM Base + Seasonality', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

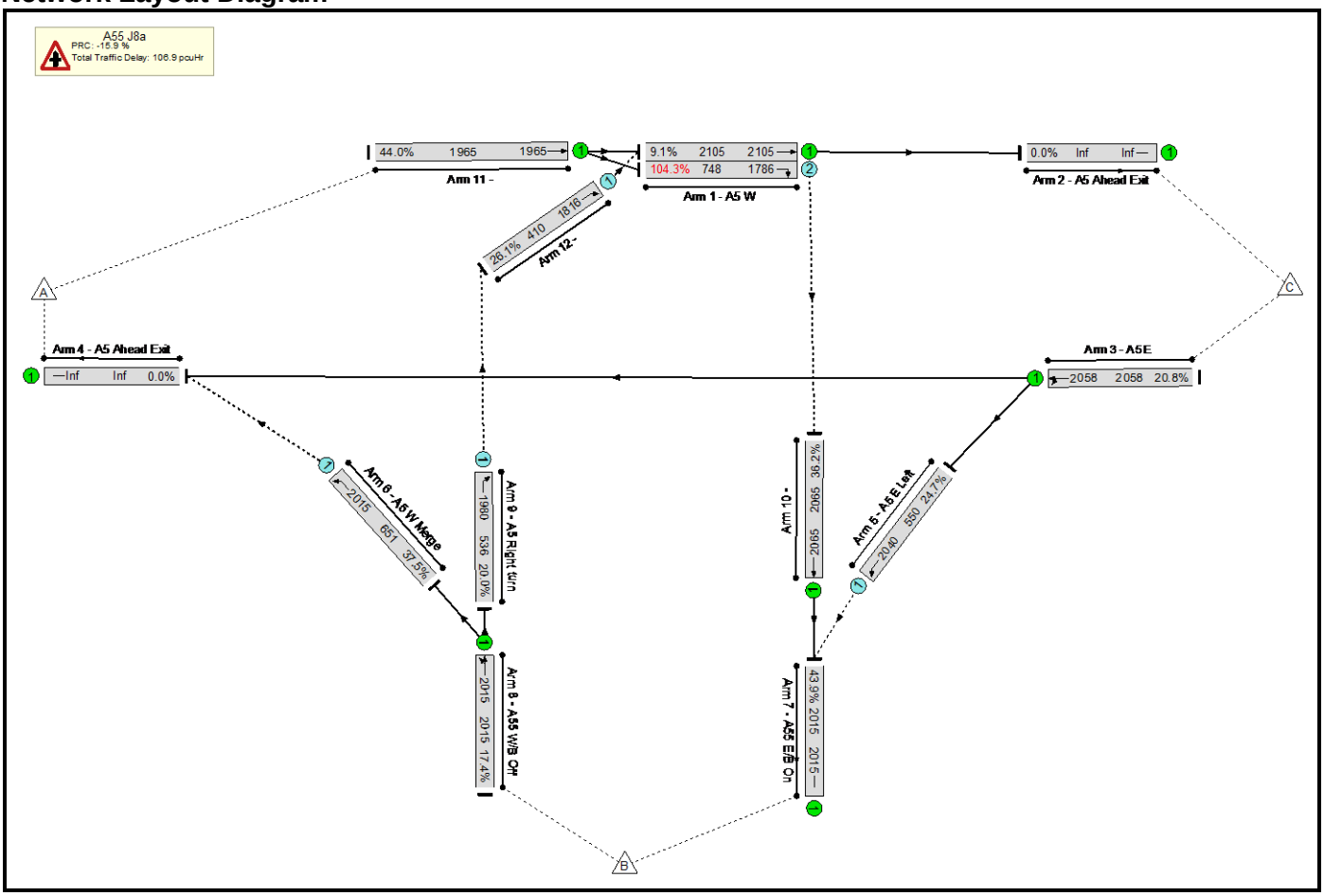
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A55 J8a Model	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**48.3%**	**1146**	**0**	**0**	**2.6**	**-**	**-**
A55 J8a	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**48.3%**	**1146**	**0**	**0**	**2.6**	**-**	**-**
1/1	A5 W Ahead	U	-		-	-	-	569	2105	2105	27.0%	-	-	-	0.2	1.2	0.2
1/2	A5 W Right	O	-		-	-	-	322	1786	764	42.2%	322	0	0	0.4	4.1	0.4
3/1	A5 E Ahead Left	U	-		-	-	-	349	2062	2062	16.9%	-	-	-	0.1	1.1	0.1
5/1	A5 E Left Ahead	O	-		-	-	-	103	2040	644	16.0%	103	0	0	0.1	3.3	0.1
6/1	A5 W Merge Left	O	-		-	-	-	319	2015	661	48.3%	319	0	0	0.5	5.3	0.5
7/1	A55 E/B On	U	-		-	-	-	425	2015	2015	21.1%	-	-	-	0.1	1.1	0.1
8/1	A55 W/B Off Ahead Ahead2	U	-		-	-	-	520	2015	2015	25.8%	-	-	-	0.2	1.2	0.2
9/1	A5 Right turn Right	O	-		-	-	-	201	1980	546	36.8%	201	0	0	0.3	5.2	0.3
10/1	Ahead	U	-		-	-	-	322	2065	2065	15.6%	-	-	-	0.1	1.0	0.1
11/1	Ahead	U	-		-	-	-	690	1965	1965	35.1%	-	-	-	0.3	1.4	0.3
12/1	Ahead	O	-		-	-	-	201	1816	448	44.9%	201	0	0	0.4	7.3	0.4

C1 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 0.00 Cycle Time (s): 3600
PRC Over All Lanes (%): 86.4 Total Delay Over All Lanes(pcuHr): 2.58

Basic Results Summary

Scenario 9: '2023 AM Base + Seasonality + Development ' (FG10: '2023 AM Base + Development + Seasonality', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

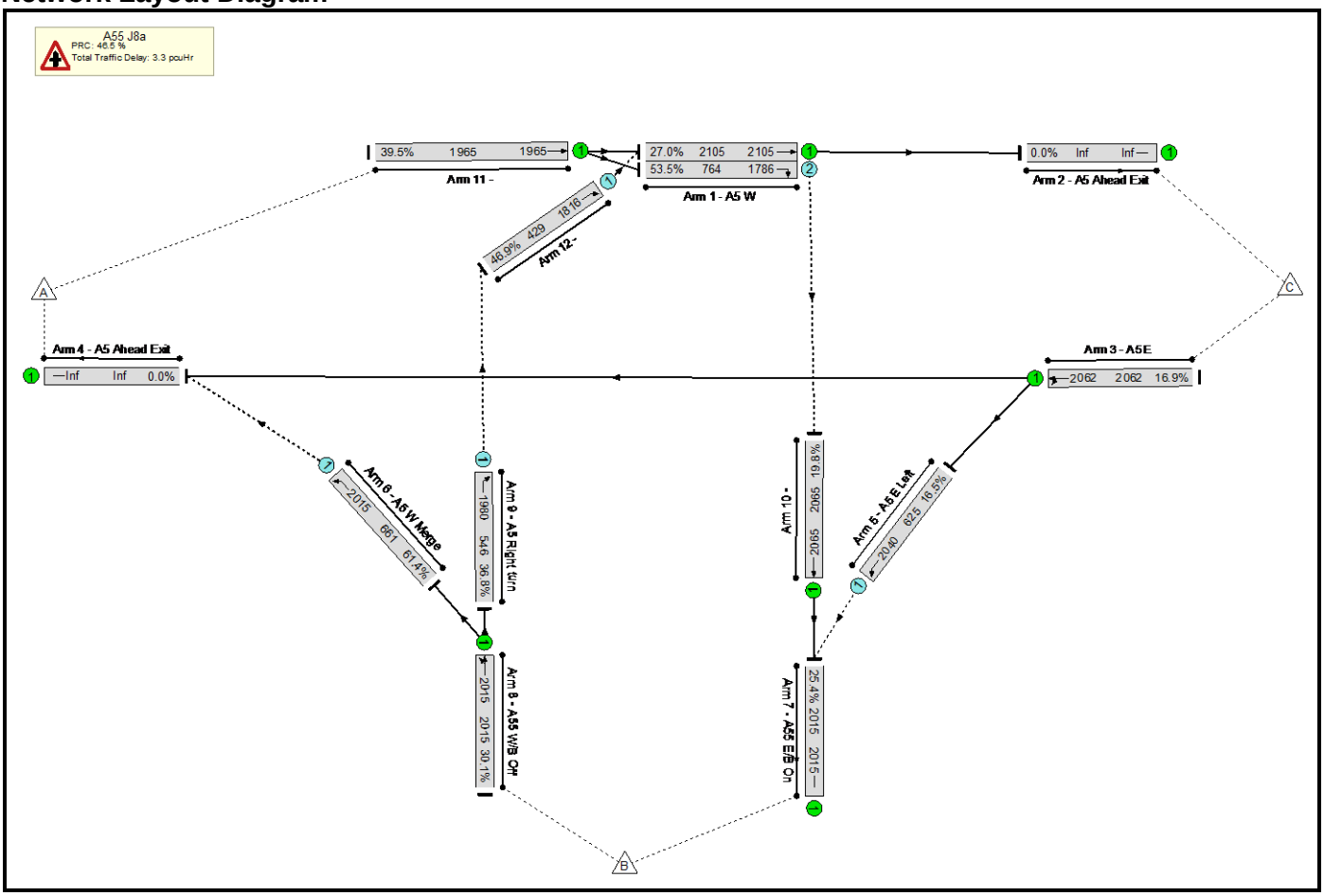
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A55 J8a Model	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**104.3%**	**1342**	**0**	**0**	**106.9**	**-**	**-**
A55 J8a	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**104.3%**	**1342**	**0**	**0**	**106.9**	**-**	**-**
1/1	A5 W Ahead	U	-		-	-	-	191	2105	2105	9.1%	-	-	-	0.0	0.9	0.0
1/2	A5 W Right	O	-		-	-	-	780	1786	748	104.3%	748	0	0	104.8	483.6	2364.2
3/1	A5 E Ahead Left	U	-		-	-	-	428	2058	2058	20.8%	-	-	-	0.1	1.1	0.1
5/1	A5 E Left Ahead	O	-		-	-	-	136	2040	550	24.7%	136	0	0	0.2	4.3	0.2
6/1	A5 W Merge Left	O	-		-	-	-	244	2015	651	37.5%	244	0	0	0.3	4.4	0.3
7/1	A55 E/B On	U	-		-	-	-	916	2015	2015	43.9%	-	-	-	0.4	1.6	0.4
8/1	A55 W/B Off Ahead Ahead2	U	-		-	-	-	351	2015	2015	17.4%	-	-	-	0.1	1.1	0.1
9/1	A5 Right turn Right	O	-		-	-	-	107	1980	536	20.0%	107	0	0	0.1	4.2	0.1
10/1	Ahead	U	-		-	-	-	780	2065	2065	36.2%	-	-	-	0.3	1.4	0.3
11/1	Ahead	U	-		-	-	-	864	1965	1965	44.0%	-	-	-	0.4	1.6	0.4
12/1	Ahead	O	-		-	-	-	107	1816	410	26.1%	107	0	0	0.2	5.9	0.2

C1 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 0.00 Cycle Time (s): 3600
PRC Over All Lanes (%): -15.9 Total Delay Over All Lanes(pcuHr): 106.91

Basic Results Summary

Scenario 10: '2023 PM Base + Seasonality + Development' (FG11: '2023 PM Base + Development + Seasonality', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: A55 J8a Model	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**61.4%**	**1320**	**0**	**0**	**3.3**	**-**	**-**
A55 J8a	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**61.4%**	**1320**	**0**	**0**	**3.3**	**-**	**-**
1/1	A5 W Ahead	U	-		-	-	-	569	2105	2105	27.0%	-	-	-	0.2	1.2	0.2
1/2	A5 W Right	O	-		-	-	-	409	1786	764	53.5%	409	0	0	0.6	5.1	0.6
3/1	A5 E Ahead Left	U	-		-	-	-	349	2062	2062	16.9%	-	-	-	0.1	1.1	0.1
5/1	A5 E Left Ahead	O	-		-	-	-	103	2040	625	16.5%	103	0	0	0.1	3.4	0.1
6/1	A5 W Merge Left	O	-		-	-	-	406	2015	661	61.4%	406	0	0	0.8	7.0	0.8
7/1	A55 E/B On	U	-		-	-	-	512	2015	2015	25.4%	-	-	-	0.2	1.2	0.2
8/1	A55 W/B Off Ahead Ahead2	U	-		-	-	-	607	2015	2015	30.1%	-	-	-	0.2	1.3	0.2
9/1	A5 Right turn Right	O	-		-	-	-	201	1980	546	36.8%	201	0	0	0.3	5.2	0.3
10/1	Ahead	U	-		-	-	-	409	2065	2065	19.8%	-	-	-	0.1	1.1	0.1
11/1	Ahead	U	-		-	-	-	777	1965	1965	39.5%	-	-	-	0.3	1.5	0.3
12/1	Ahead	O	-		-	-	-	201	1816	429	46.9%	201	0	0	0.4	7.9	0.4

C1 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 0.00 Cycle Time (s): 3600
PRC Over All Lanes (%): 46.5 Total Delay Over All Lanes(pcuHr): 3.32

North Wales Connection Project

Transport Assessment – ANNEX M

Physical Mitigation Measures

National Grid
National Grid House
Warwick Technology Park
Gallows Hill
Warwick
CV34 6DA

Final September 2018

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Organisation	AECOM		
Author	Phil Gibbon		
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1	Proposed priority junction layout
2	Proposed re-profiling and vegetation clearance
3	Proposed Measures
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5	Proposed widening and swept path analysis
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7	Proposed narrowing and swept path analysis
8	Proposed passing places locations
9	Proposed modifications and swept paths
10	Traffic Flow Diagrams – Access F14
11	Proposed modifications and swept paths
12	Proposed modifications and swept path

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1 Introduction

1.1 INTRODUCTION

1.1.1 This note has been prepared to identify the potential physical mitigation measures for the Proposed Development

1.1.2 The note sets out the location and the rationale for each potential measure and should be read in conjunction with the Transport Assessment and Construction Traffic Management Plan.

1.1.3 The requirement for each of the potential physical mitigation measures would need to be reviewed at the construction stage of the Proposed Development based on the latest available information.

2 Physical Mitigation Measures - Anglesey

2.1.1 Refer to drawings listed below and contained in Appendix A of this note:

Table 1 : Physical Mitigation Measures - Anglesey

Section	Ref.	Location Ref.	Drawing Number
All	-	Location Plans	60514717-MM-100 - Sheet 1
A	1	A 5025 North of Tregele	60514717-MM-101 - Inset A2
	2	Brynndu Road	60514717-MM-101 - Inset A5
D	3	B5420 / Access D3 OHL Compound	60514717-MM-105 - Sheets 1 to 6
E	4	Unnamed Road 21	60514717-MM-106 - Inset E1
	5	A5 - Holyhead Road / Llanddaniel Road – NCN8	60514717-MM-107
	6	Llanddaniel Road – NCN8	60514717-MM-107
F	7	A5 - Holyhead Road / Lon Pont Ronwy - UNR22	60514717-MM-108 and 109
	8	Lon Pont Ronwy - UNR 22	60514717-MM-109

2.2 LOCATION 1: A5025 NORTH OF TREGELE

Overview

2.2.1 This location is an existing priority control junction to a layby area off the A5025 near Tregele. Proposed temporary access 'A5A' for overhead line HGV access would be located directly adjacent to the existing priority junction

Proposals

2.2.2 It is proposed that the existing priority junction be widened as shown below:

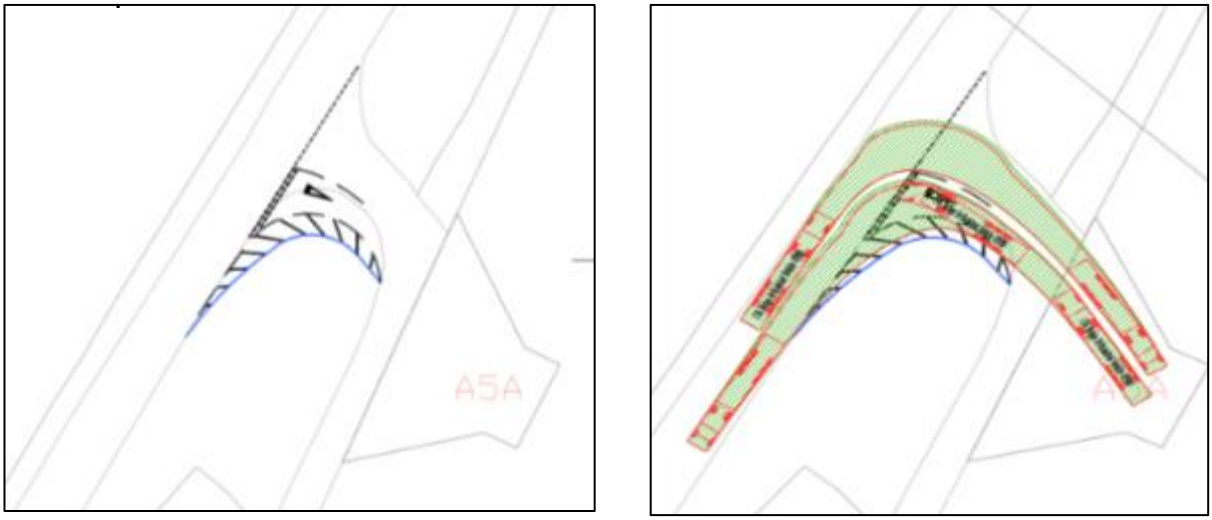

Figure 1 Proposed priority junction layout

Justification

2.2.3 There would be an increase in HGV traffic using the junction to facilitate the construction of the overhead line (OHL) element of the project.

2.2.4 The junction amendments are proposed to accommodate the swept path of a 16.5m articulated vehicle, which could be required for plant and equipment delivery to the site.

2.3 LOCATION 2: BRYNDDU ROAD

Overview

2.3.1 This location is south of Llanfechell near proposed OHL access A10. This access is on a proposed LGV and tractor trailer construction route connecting A5025 and B5111

Proposals

2.3.2 Vegetation clearance and maintenance whilst access A10 is in use, potentially land re-profiling and fencing

Figure 2 Proposed re-profiling and vegetation clearance

Justification

2.3.3 Requirement to improve visibility for the temporary access point and visibility around the bend for general traffic using the route.

2.1 LOCATION 3: B5420 / OHL COMPOUND ACCESS

Overview

2.1.1 This location is to the east of Llangefni on the B5420 / Penmynydd Road. Access D3 is an existing access and is proposed to serve the main overhead line construction compound.

2.1.2 Access D4 is an existing field access and is proposed to be an HGV access point to the overhead line. Access D4 could also be part of an off-highway through connection from access E5A near A55 Junction 7.

Proposals

2.1.3 It is proposed to implement traffic calming measures to reduce speeds and enhance road safety along this section of the B5420.

2.1.4 The measures could include:

- Temporary Traffic Regulation Orders – speed reduction from National Speed Limit (NSL) to 30mph incorporating ‘no overtaking’ restrictions;

- Road markings – no overtaking, narrow central ghost island, move left arrows, 30mph roundels & ARAF/ SLOW markings, reflective or solar studs;
- Textured Surfacing – high friction surfacing at the OHL compound access 'D3', rumble strips at westbound approach to access 'D3'; and,
- Signage – temporary construction traffic signage, speed limit signage, variable message signage.

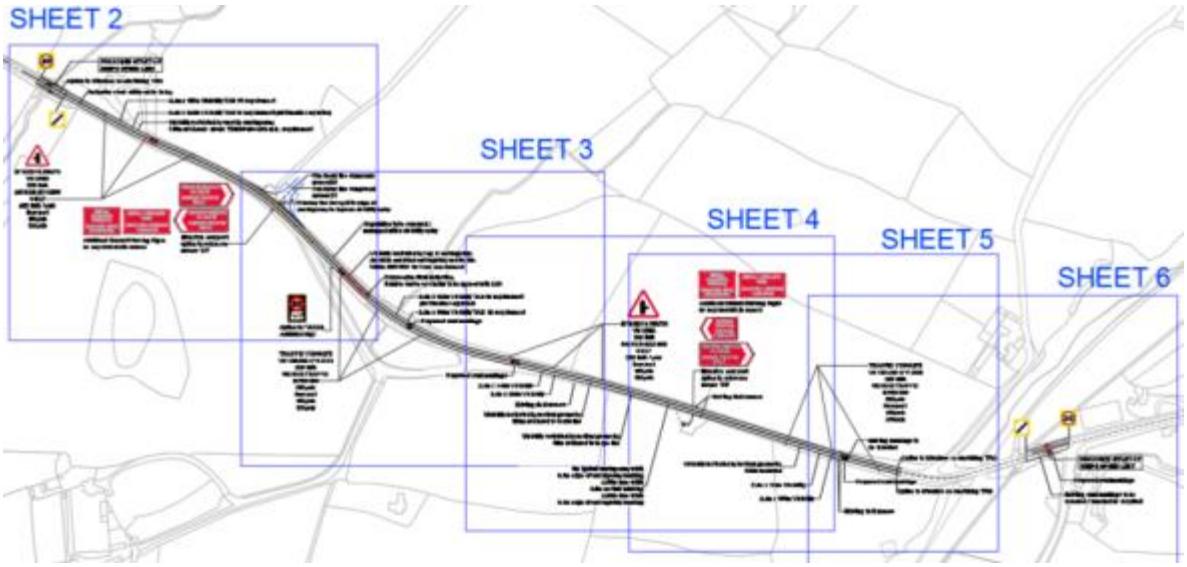

Figure 3 Proposed measures

Justification

2.1.5 Recorded 85th percentile speeds are between 47 mph and 54 mph along the B5420 at this location.

2.1.6 Welsh Government Technical Advice Note (TAN 18) visibility splay requirements cannot be achieved due to existing horizontal and vertical carriageway alignment.

2.1.7 The TAN 18, *Design Manual for Roads and Bridges* and *Manual for Streets* visibility splays requirements are shown in **Table 2**. The values shown in green are achievable at the access point.

2.2 LOCATION 4: UNNAMED ROAD 21 – PASSING PLACE

Overview

2.2.1 Unnamed Road 21 (UNR21) is located to the south-east of Star and has an existing carriageway width of approximately 4m.

Proposals

2.2.2 Provision of suitable passing place at the eastern end of UNR 21, for use during construction of the OHL element of the Proposed Development.

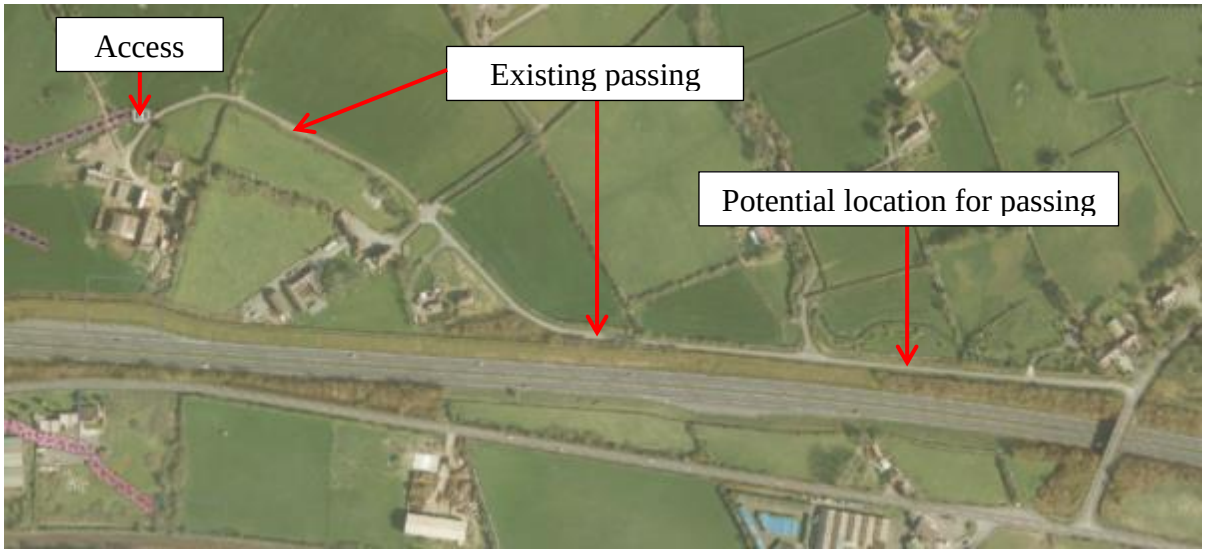

Figure 4 UNR 21 and proposed measure

Justification

2.2.3 A potential passing place has been proposed on UNR21 to allow vehicles to pull over in the event of an opposing HGV movement on the route.

2.2.4 Access 'E5A' and associated temporary access track located near A55 Junction 7 provides the opportunity to reduce construction traffic along UNR21 and at access E5. However, as the route remains as an option the passing place remains as a potential mitigation measure.

2.3 LOCATION 5: LLANDDANIEL ROAD / A5 – PRIORITY JUNCTION

Overview

2.3.1 This is an existing priority junction located to the south of Star and to the west of Llanfairpwll.

Proposals

2.3.2 The potential for junction widening is proposed in the event of long term contingency route use for the construction traffic associated with the Braint tunnel head house.

2.3.3 The potential junction widening to accommodate the swept paths associated with a 16.5m articulated vehicle or equivalent is shown below.

2.3.4

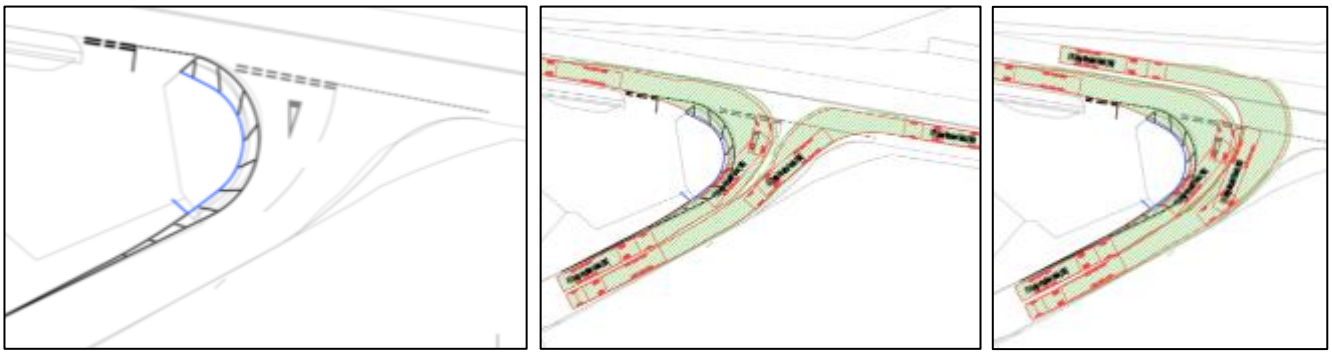

Figure 5 Proposed widening and swept path analysis

Justification

2.3.5 This junction is part of the contingency route strategy for the Braint tunnel head house and therefore could potentially be used for construction traffic.

2.3.6 A contingency route would be required in the event of Lon Pont Ronwy / UNR22 being unavailable for construction traffic use, and access to the Braint site for the construction of the Proposed Development remaining essential.

2.4 LOCATION 6: LLANDDANIEL ROAD / NCN ROUTE 8 BETWEEN E7 AND E6

Overview

2.4.1 This location is north of Llanddaniel Fab and south of Star. There is an existing bus service and the National Cycle Route 8 runs on the carriageway at this location. The existing carriageway width is circa 5.5m.

Proposals

2.4.2 In the event where OHL construction traffic between access E7 and E6 cannot be adequately managed or a contingency route is required for the Braint tunnel head house, there is a potential for carriageway widening at this location as indicated below and detailed in AECOM drawing 60514717-MM-107.

Justification

2.4.3 The OHL construction traffic, which is deemed unsuitable for the local road network at this location, would route through the Braint tunnel head house site to access E7 and then use Llanddaniel Road to access E6.

2.4.4 Construction traffic between E7 and E6 would be suitably managed during the movement.

2.4.5 In the event, where OHL construction traffic between access E7 and E6 cannot be adequately managed or the contingency routes for the Braint tunnel head house are required, then there is potential for carriageway widening at this location as and detailed in AECOM drawing 60514717-MM-107

2.5 LOCATION 7: LON PONT RONWY / A5 – PRIORITY JUNCTION

Overview

2.5.1 This is an existing priority junction between the A5 and Lon Pont Ronwy / UNR22 and is located to the west of Llanfairpwll and A55 Junction 7A.

2.5.2 Lon Pont Ronwy / UNR22 runs north / south and connects the A5 with the A4080.

Proposals

2.5.3 Junction realignment and widening to accommodate the swept paths of a 16.5m articulated vehicle.

Figure 6 Proposed widening and swept path analysis

2.5.4 Reduced carriageway over the bridge.

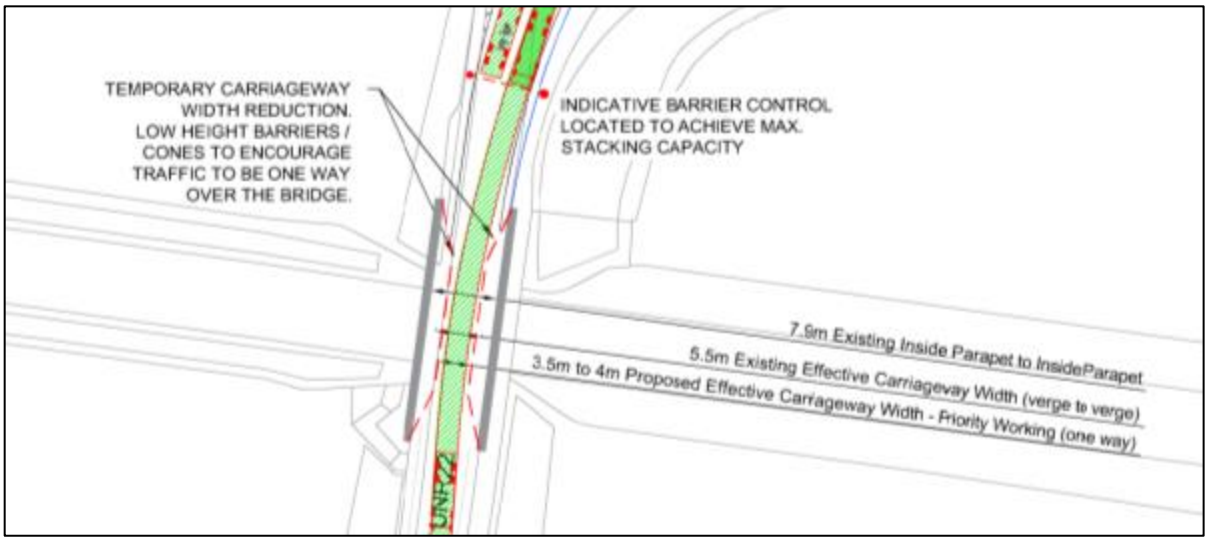

Figure 7 Proposed narrowing and swept path analysis

2.5.5 Road closed to general traffic.

2.5.6 Provision of suitable physical barrier and diversion signage.

Justification

2.5.7 Facilitate the safe movements of HGVs at the junction

2.5.8 Ensure one-way construction traffic over the rail bridge in accordance with Network Rail requirements.

2.5.9 Ensure general traffic and construction traffic are kept separate for safe operation during the construction of the proposed development.

2.6 LOCATION 8: UNNAMED ROAD 22 / PONT RONWY – PASSING PLACES

Overview

2.6.1 Lon Pont Ronwy / UNR22 is located to the west of Llanfairpwll and A55 Junction 7A. Lon Pont Ronwy / UNR22 runs north / south and connects the A5 with the A4080.

Proposals

2.6.2 Potential for provision of 2 passing places ‘PP1’ and ‘PP2’ for construction traffic along Lon Pont Ronwy / UNR22 as indicated on Figure 8.

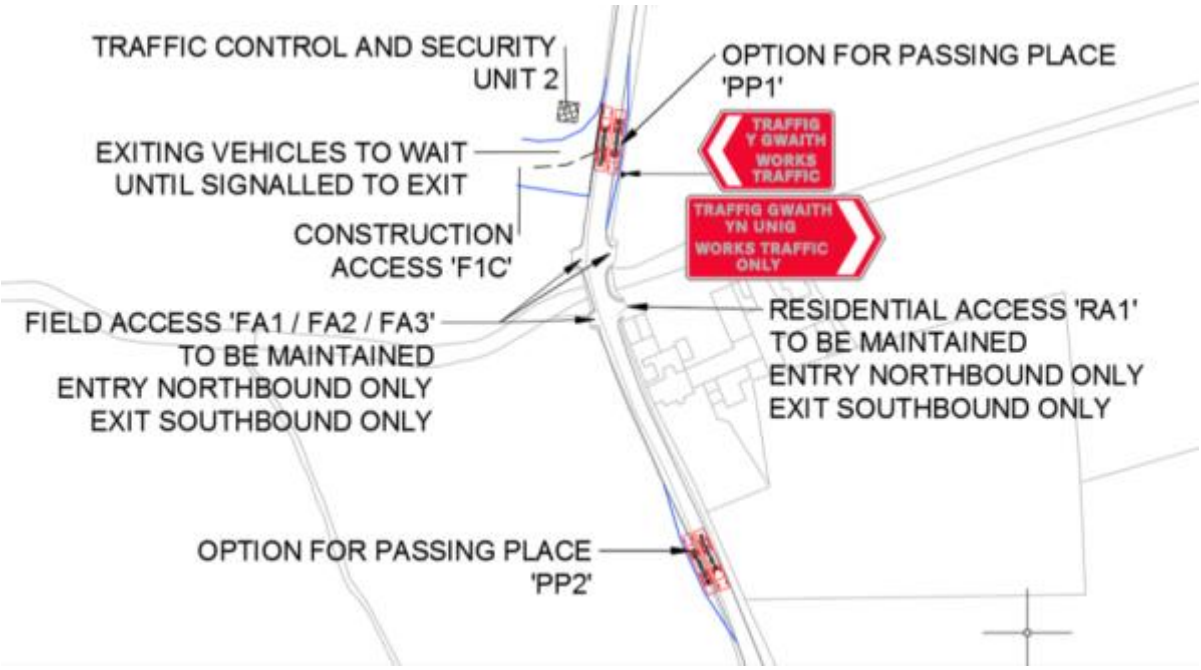

Figure 8 Proposed passing places locations

2.6.3 For more details please see AECOM drawing 60514717 – MM – 109.

3 Physical Mitigation Measures - Gwynedd

Justification

3.1.1 Provides opportunity for two-way construction traffic to pass safely, noting that general traffic will be prohibited along this route.

3.1.2 Refer to AECOM drawings listed below and contained in Appendix A of this note:

Table 2 : Physical Mitigation Measures - Gwynedd

Section	Ref.	Location Ref.	Drawing Number
All	-	Location Plans	60514717-MM-100 - Sheet 2
F	9	Pentir Substation / Access 'F14'	60514717-MM-111
	10	Fodolydd Lane (west)	60514717-OM-006, 008 and 012 (see Transport Assessment Annex N)
	11	Fodolydd Lane (east)	60514717-OM-011 (see Transport Assessment Annex N)

3.2 LOCATION 9: ACCESS F14

Overview

3.2.1 Existing Pentir substation access located off the B4547.

Proposals

3.2.2 Potential modifications to existing access and provision of right turn pocket at the Pentir substation access 'F14.'

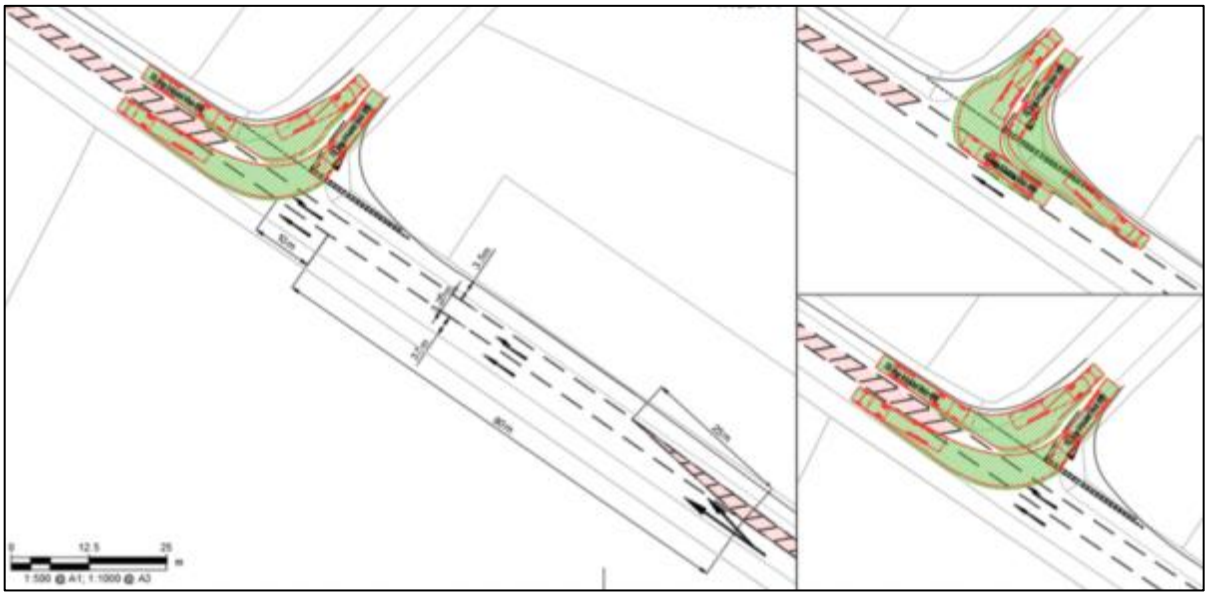

Figure 9 Proposed modifications and swept paths

3.2.3 For more details please see AECOM drawing 60514717 – MM – 111.

Justification

3.2.4 As shown in the junction flow diagrams on Figure 10, it is anticipated to be an increase in right turning traffic at the access 'F14.'

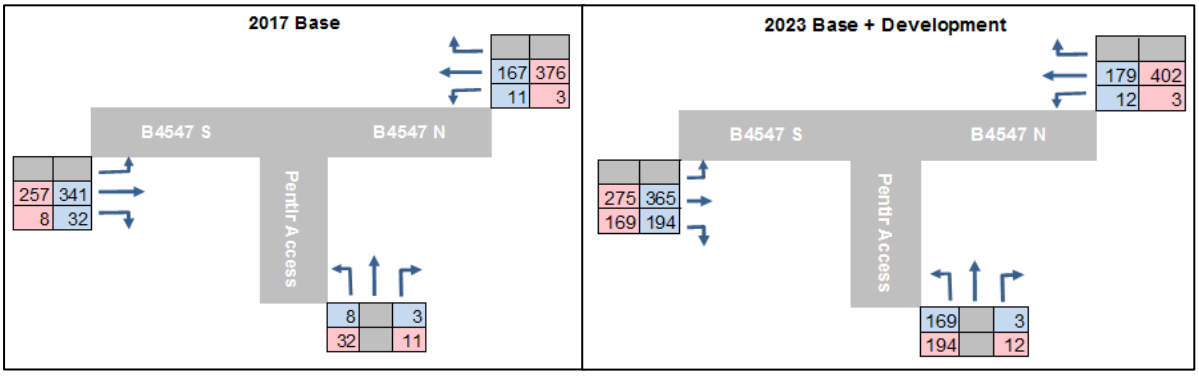

Figure 10 Traffic Flow Diagrams – Access F14

3.2.5 Provision of a right turn lane allows the ahead movement to proceed unrestricted.

3.2.6 Modifications to the existing access will help to facilitate movement of HGVs to and from the local road network.

3.3 LOCATION 10: FODOLYDD LANE (WEST)

Overview

3.3.1 Access 'F3' and Tŷ Fodol tunnel head house site via B4547 and Fodolydd Lane (east).

Proposals

3.3.2 Potential for carriageway widening and embankment / retaining works to accommodate 'worst-case' scenario required for use during operation and maintenance at the Ty Fodol tunnel head house.

Figure 11 Proposed modifications and swept paths

3.3.3 For more details please see AECOM drawing 60514717 – OM – 006 to 012 inclusive.

Justification

3.3.4 The carriageway widening could be required for the operation and maintenance phase of the Proposed Development.

3.3.5 The route to Ty Fodol tunnel head house access 'F3' is required to accommodate a vehicle for a 3-6 month period and a 1 in 10 or 20 year operation or maintenance event. The assumed worst case scenario is a 16.5m articulated vehicle.

3.4 LOCATION 11: FODOLYDD LANE (EAST)

Overview

3.4.1 Access 'F4' and Tŷ Fodol tunnel head house site via B4547 and Fodolydd Lane (west).

Proposals

3.4.2 Potential for carriageway widening works at a number of locations along Fodolydd Lane (west) to accommodate the swept path of a large vehicle such as a 400T crane.

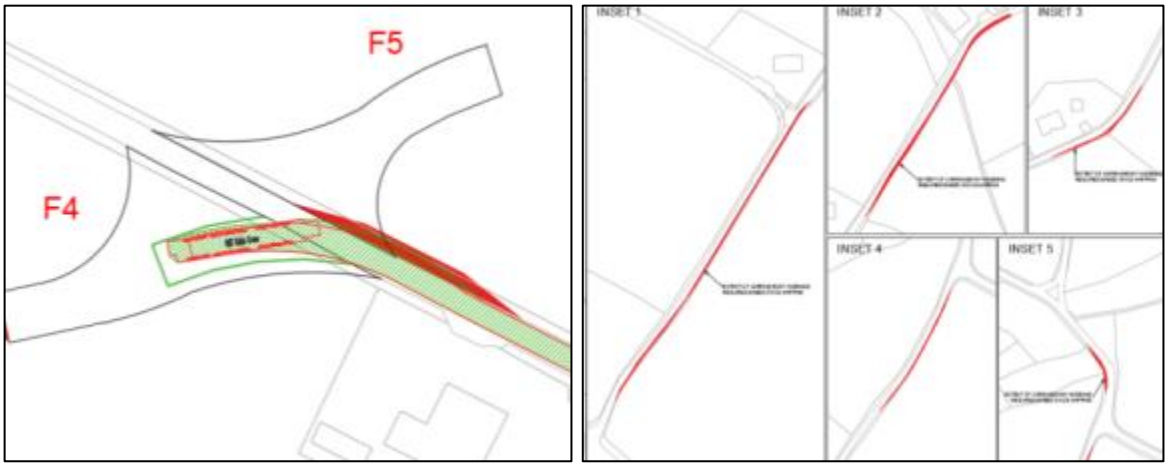

Figure 12 Proposed modifications and swept path

3.4.3 For more details please see AECOM drawing 60514717 – OM – 006 to 012 inclusive.

Justification

3.4.4 The carriageway widening could be required for the operation and maintenance phase of the Proposed Development.

3.4.5 The route to Ty Fodol tunnel head house access ‘F4’ is required to accommodate a vehicle for a 1 in 40 years or unplanned operation or maintenance event. The assumed worst case scenario is a 400T crane.

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Appendix A - Drawings

Isle of Anglesey

Table A.1 : Physical Mitigation Measures - Anglesey			
Section	Ref.	Location Ref.	Drawing Number
All	-	Location Plan	60514717-MM-100 - Sheet 1
A	1	A 5025 North of Tregele	60514717-MM-101 - Inset A2
	2	Brynndu Road	60514717-MM-101 - Inset A5
B	-	Area B	60514717 – MM - 102
C	-	Area C	60514717 – MM - 103
D	-	Area D	60514717 – MM - 104
	3	Access D3 OHL Compound	60514717-MM-105 - Sheets 1 to 6
E	4	Unnamed Road 21	60514717-MM-106 - Inset E1
	5	A5 / Llanddaniel Road	60514717-MM-107
	6	Llanddaniel Road – NCN8	60514717-MM-107
F	7	A5 / Lon Pont Ronwy - UNR22	60514717-MM-108 and 109
	8	Lon Pont Ronwy - UNR 22	60514717-MM-109

Gwynedd

Table A.2 : Physical Mitigation Measures - Gwynedd			
Section	Ref.	Location Ref.	Drawing Number
All	-	Location Plan	60514717-MM-100 - Sheet 2
F	9	Pentir Substation / Access 'F14'	60514717-MM-111
	10	Fodolydd Lane (west)	60514717-OM-006, 008 and 012 (see Transport Assessment Annex N)
	11	Fodolydd Lane (east)	60514717-OM-011 (see Transport Assessment Annex N)

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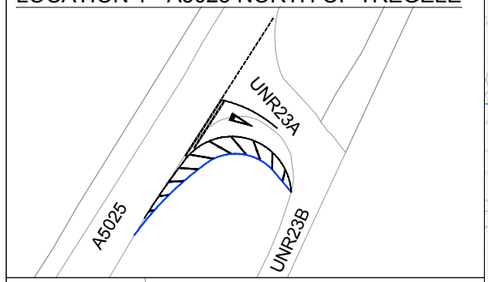
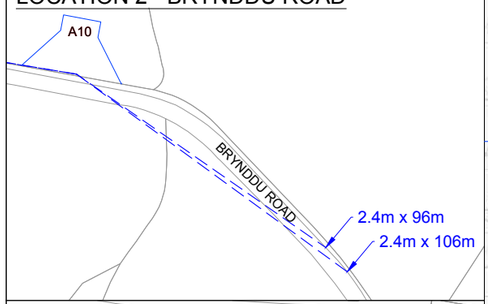
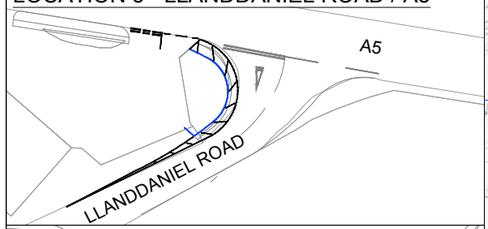
LOCATION 1 - A5025 NORTH OF TREGELE



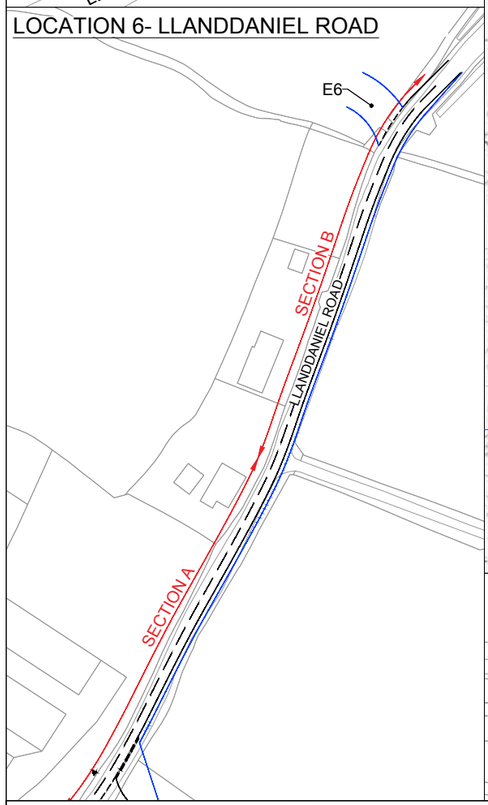
LOCATION 2 - BRYNDDU ROAD

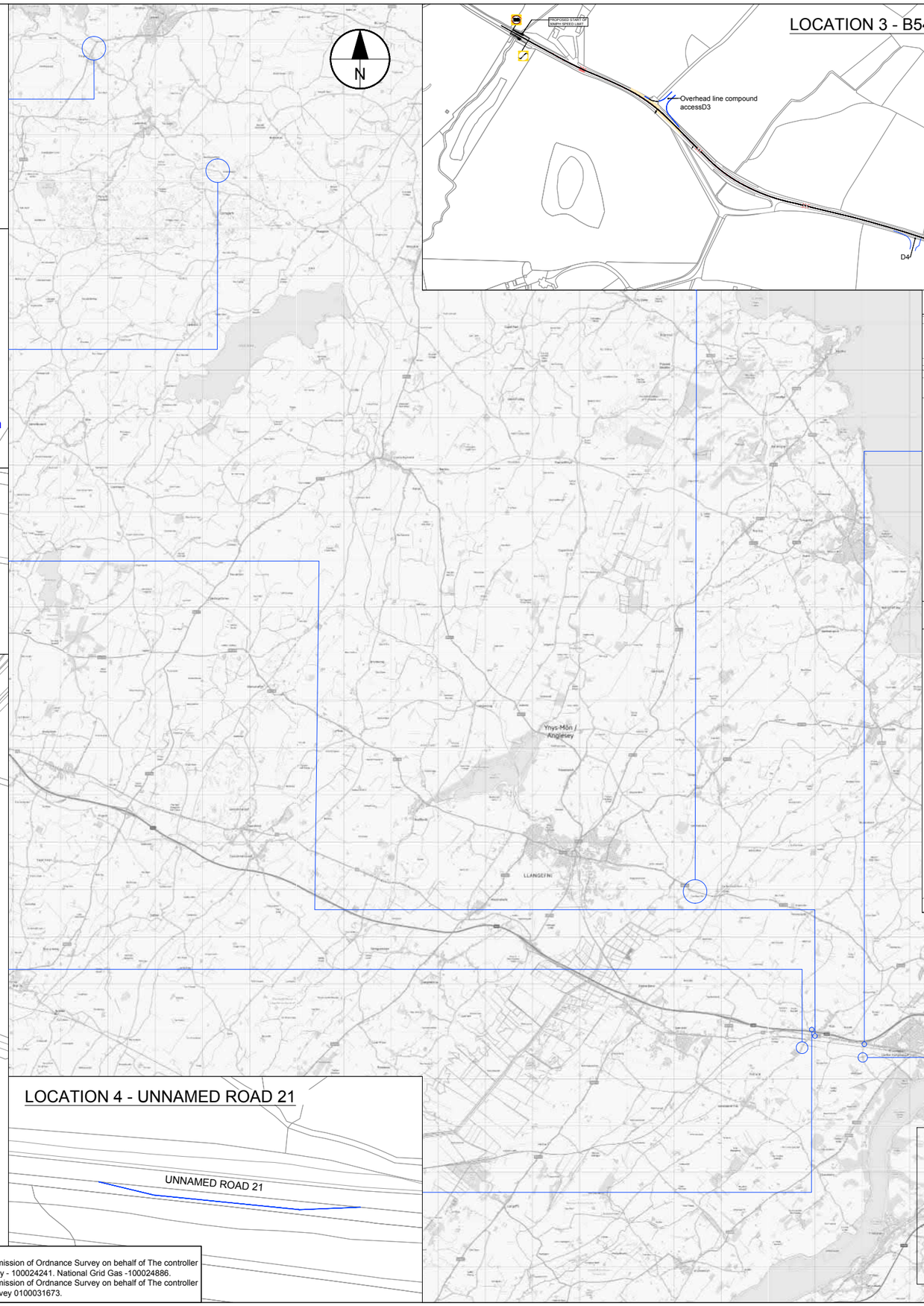


LOCATION 5 - LLANDDANIEL ROAD / A5

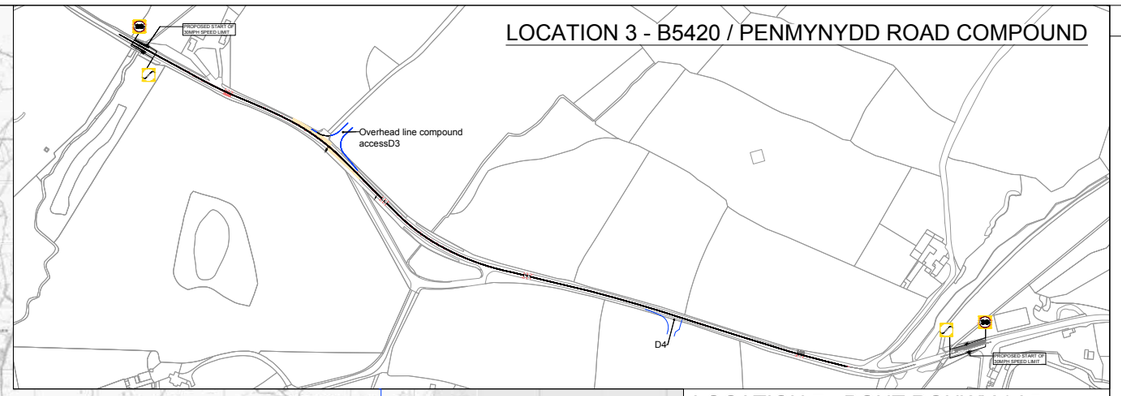


LOCATION 6- LLANDDANIEL ROAD

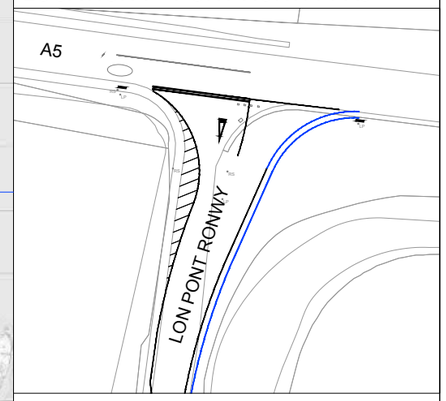




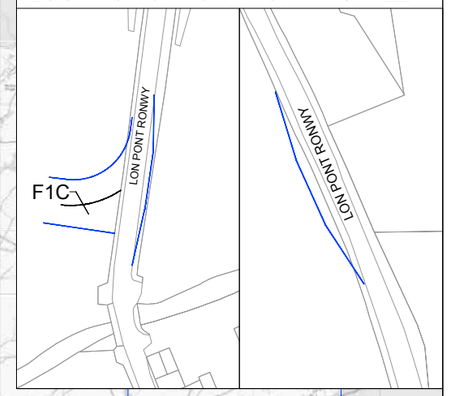
LOCATION 3 - B5420 / PENMYNYDD ROAD COMPOUND



LOCATION 7 - PONT RONWY / A5

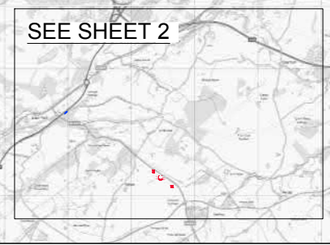


LOCATION 8 - PONT RONWY UNR22



LOCATION 4 - UNNAMED ROAD 21

SEE SHEET 2



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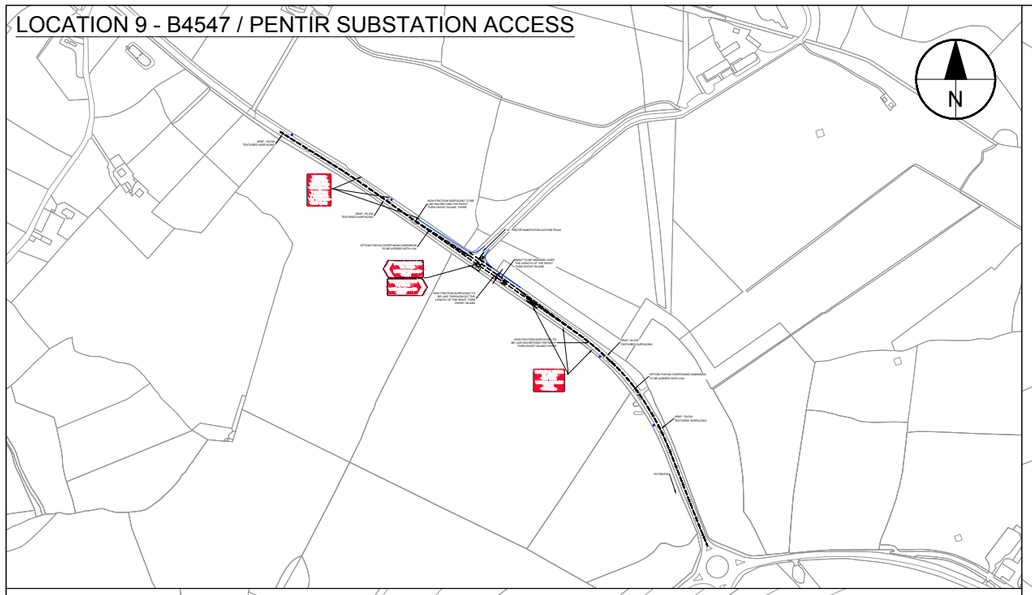
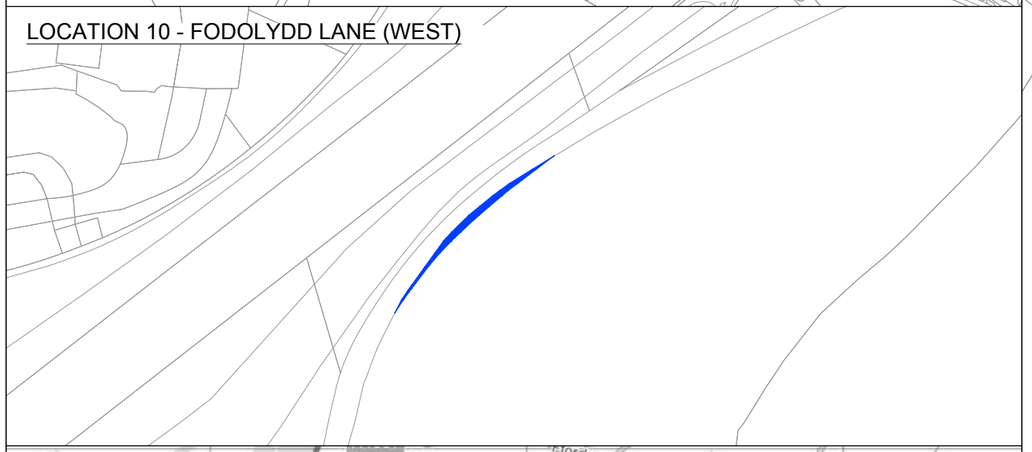
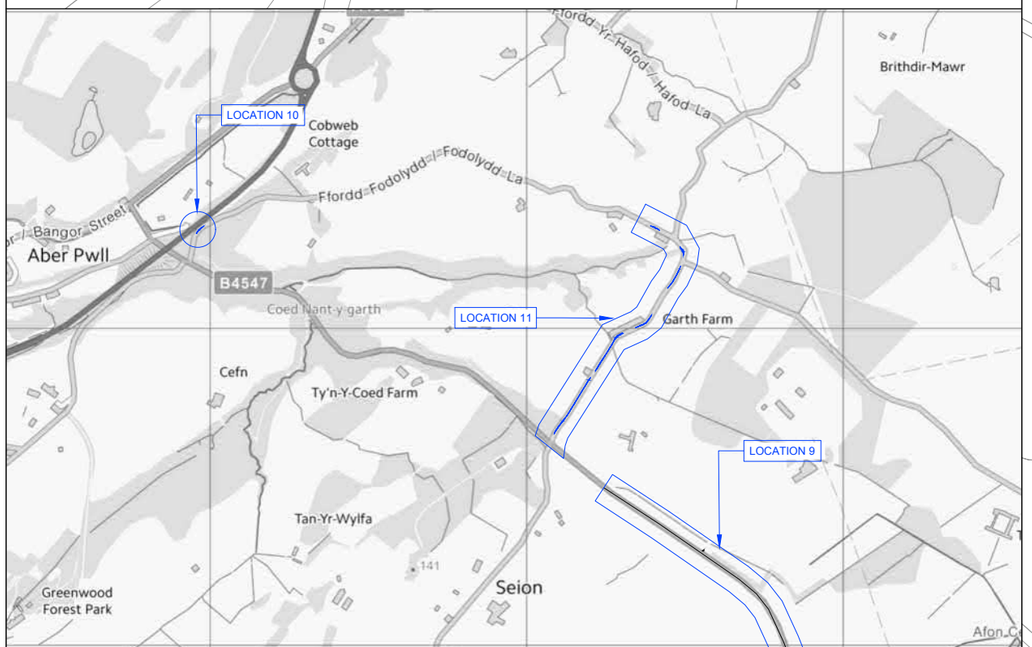
LOCATION 9 - B4547 / PENTIR SUBSTATION ACCESS



LOCATION 10 - FODOLYDD LANE (WEST)





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LOCATION 11 - FODOLYDD LANE (EAST)

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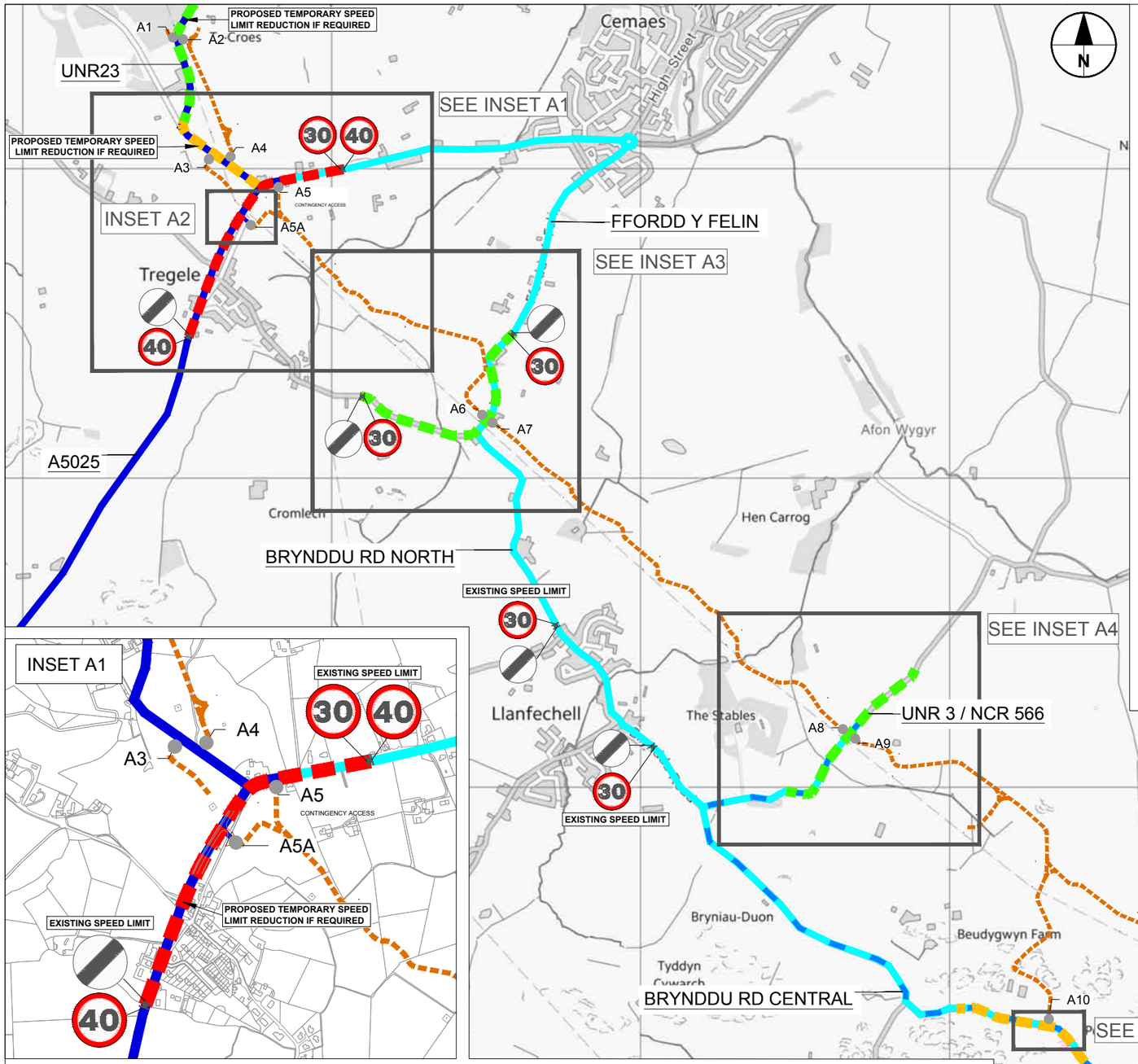

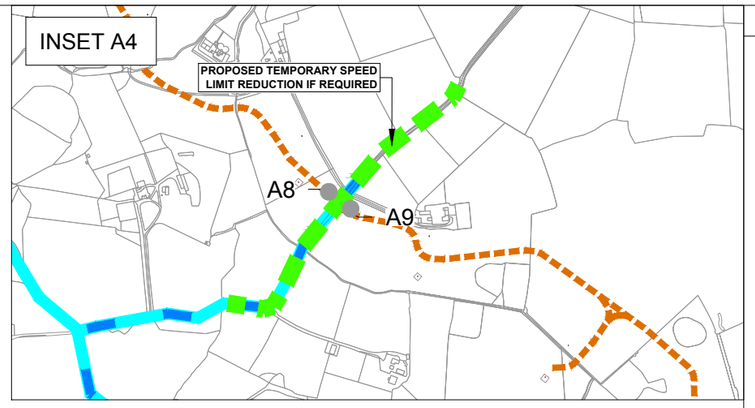

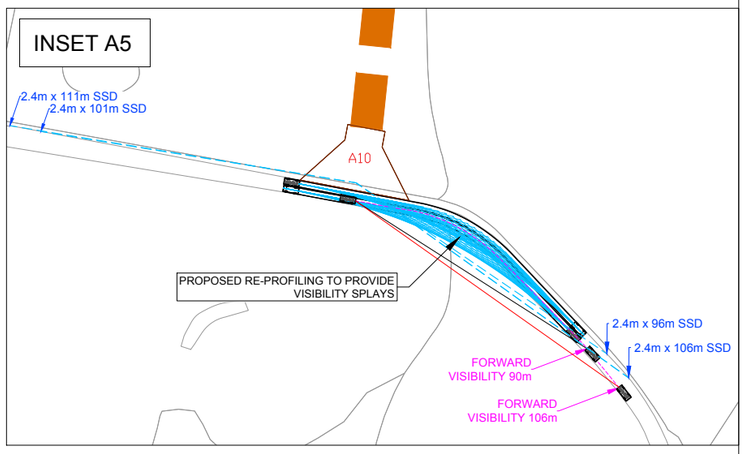

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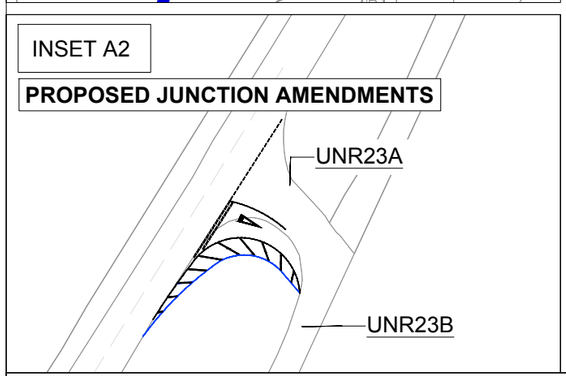

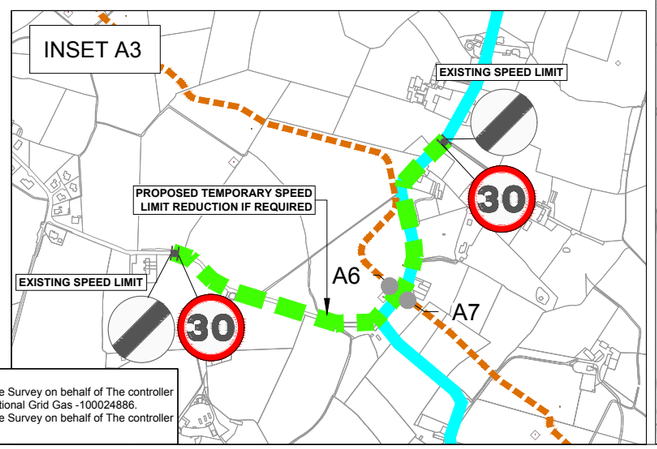

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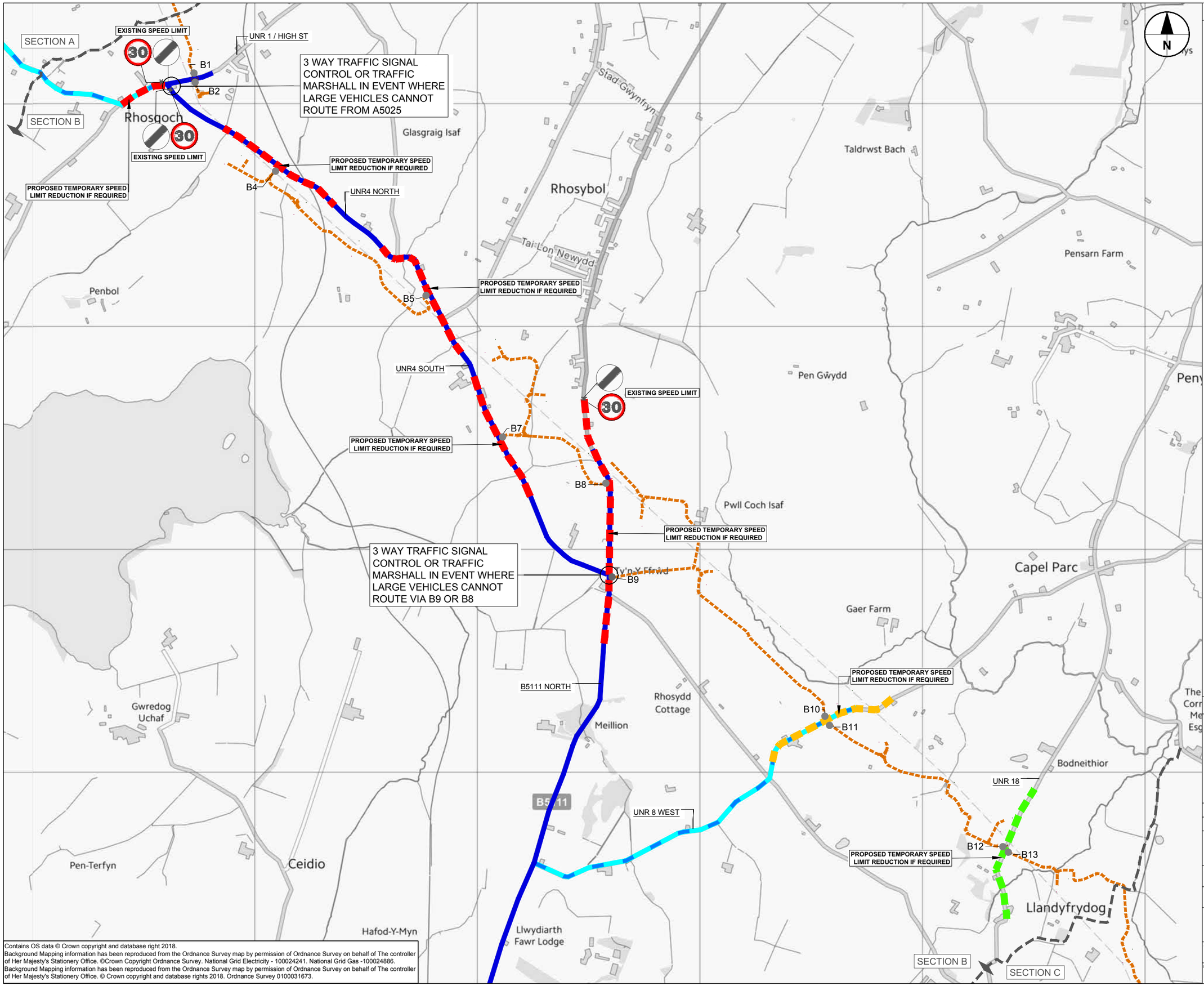

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Scheme Name: NORTH WALES CONNECTION

Document Title: PROPOSED HIGHWAYS MITIGATION MEASURES SECTION B

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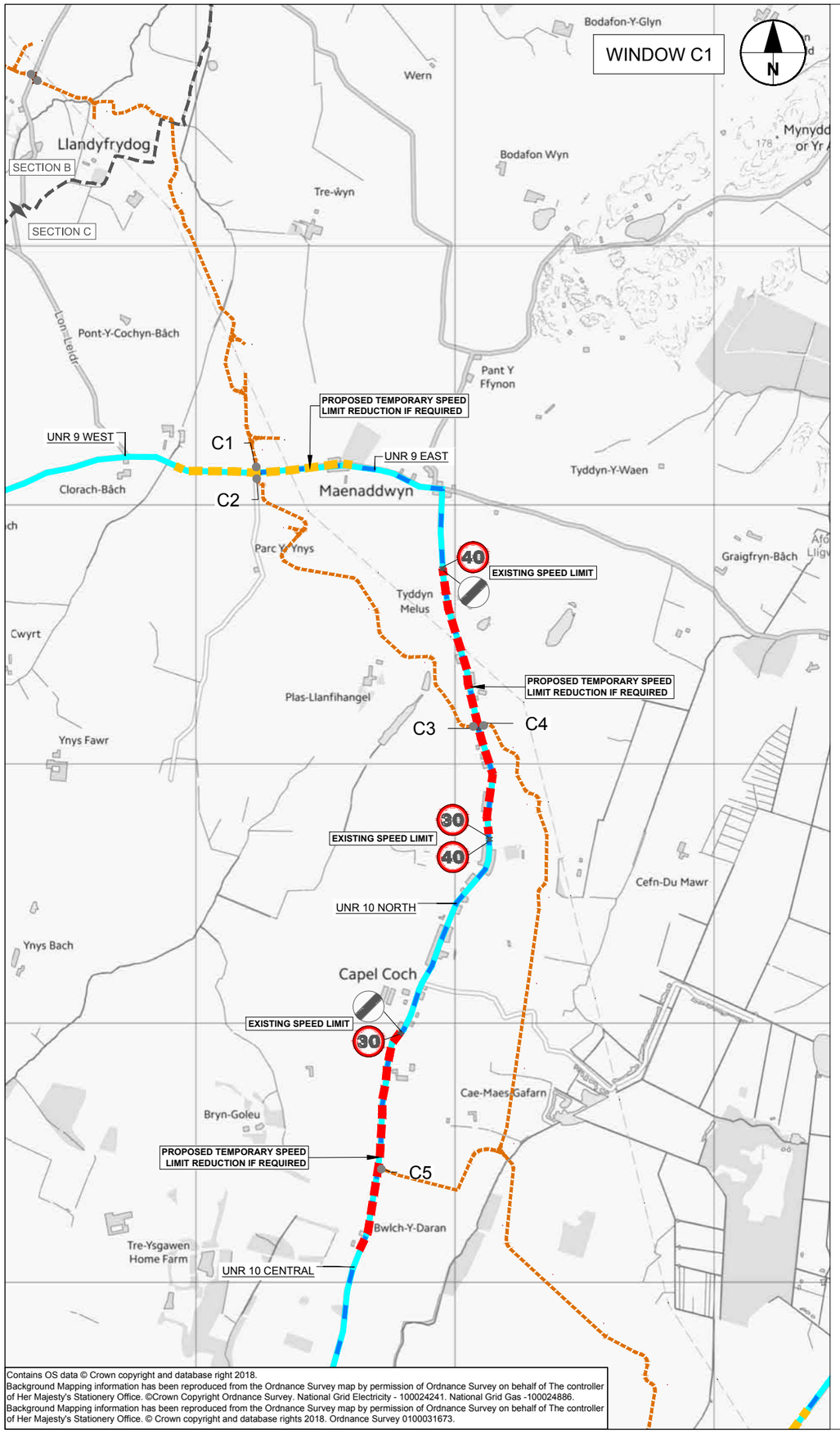

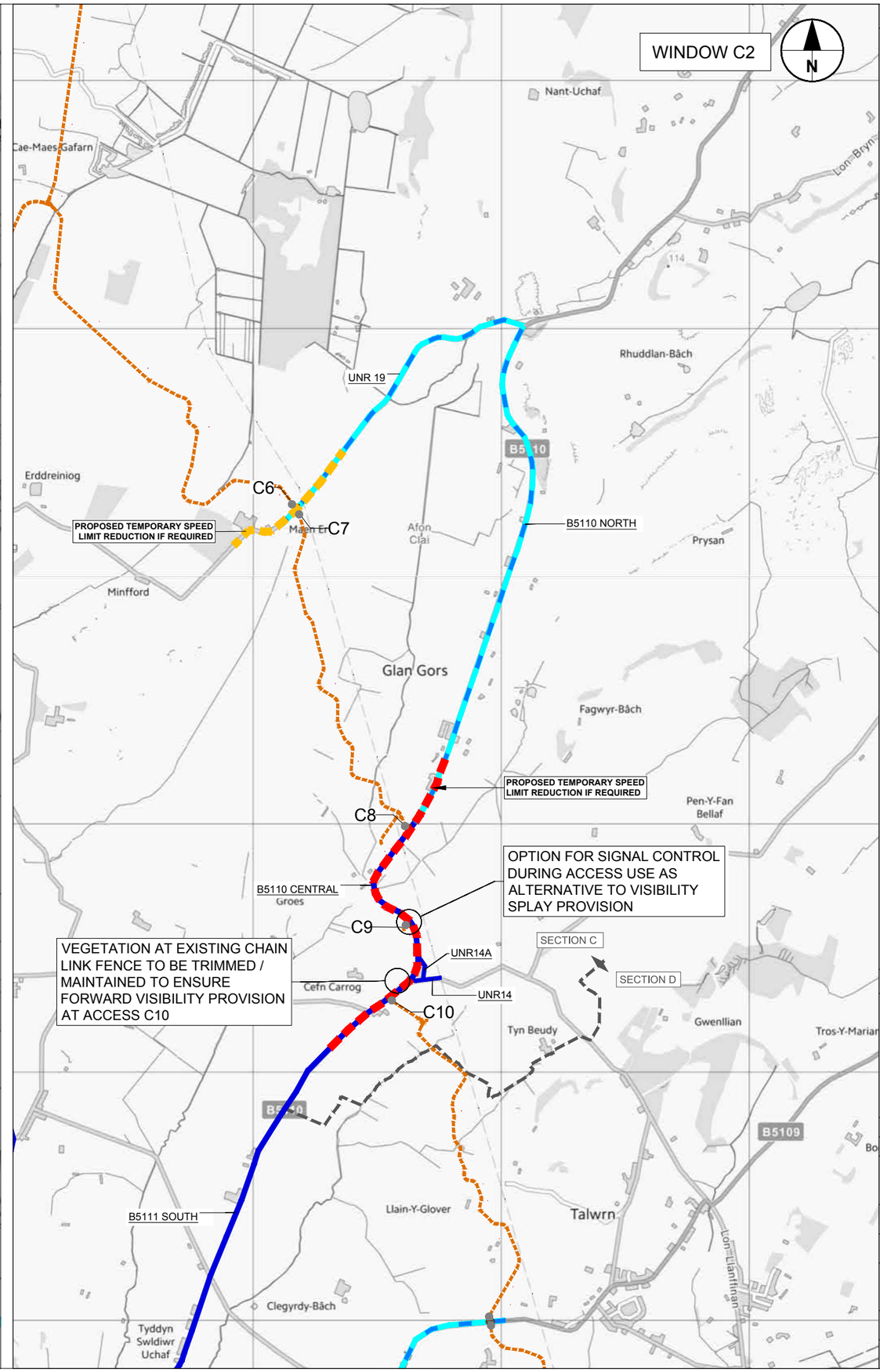

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PROPOSED SPEED REDUCTION TRAFFIC REGULATION ORDER EXTENTS

*RECORDED 85TH PERCENTILE SPEEDS

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TYPICAL HAZARD WARNING SIGNS ON APPROACH TO AND AT WORKS ACCESS

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Document Title:	PROPOSED HIGHWAYS MITIGATION MEASURES SECTION C

Creator:	Checker:	Approver:	Sheet Number:
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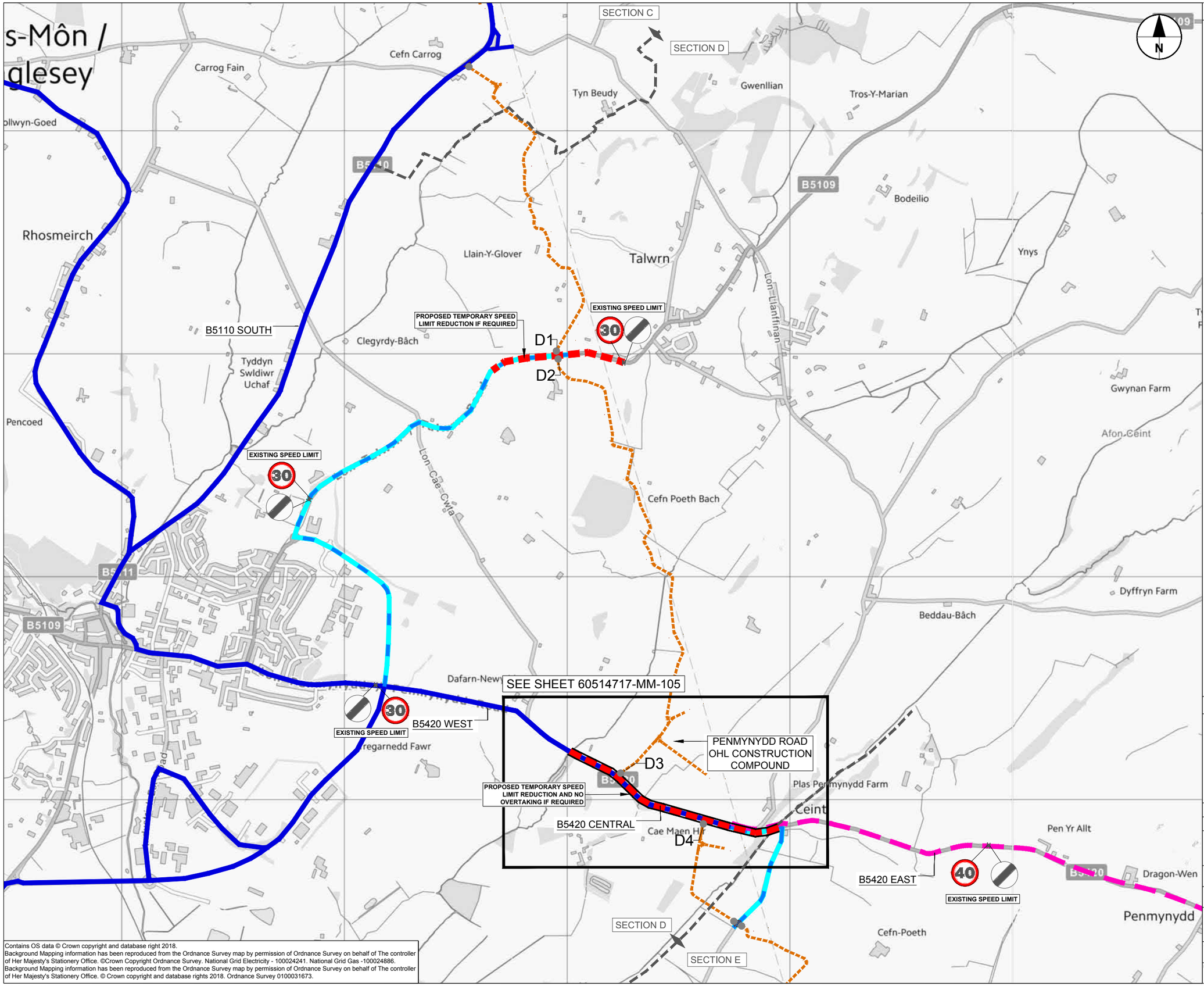

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- SITE ACCESS TRACKS
- SITE ACCESS POINT

PROPOSED SPEED REDUCTION TRAFFIC REGULATION ORDER EXTENTS

*RECORDED 85TH PERCENTILE SPEEDS
- <35MPH
- >35PMH <40MPH
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PROPOSED NO OVERTAKING TRAFFIC REGULATION ORDER EXTENTS

TYPICAL HAZARD WARNING SIGNS ON APPROACH TO AND AT WORKS ACCESS

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Rev	Date	Description	CAD	Chk	App
	20.07.2018	DCO Submission	-	-	-

nationalgrid

Site: NWC

Scheme Name: NORTH WALES CONNECTION

Document Title: PROPOSED HIGHWAYS MITIGATION MEASURES SECTION D

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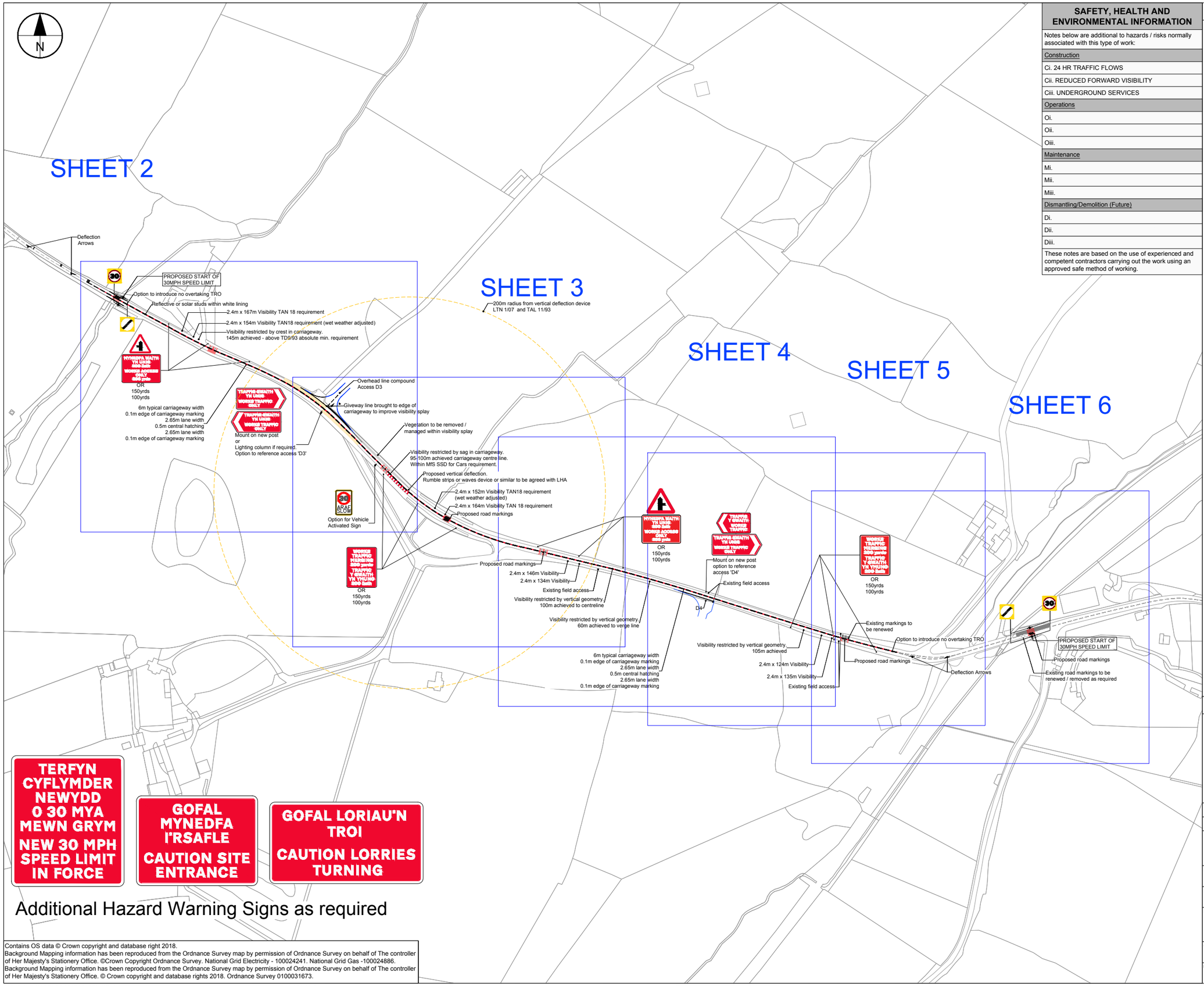

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

Notes below are additional to hazards / risks normally associated with this type of work:

Construction
Ci. 24 HR TRAFFIC FLOWS
Cii. REDUCED FORWARD VISIBILITY
Ciii. UNDERGROUND SERVICES
Operations
Oi.
Oii.
Oiii.
Maintenance
Mi.
Mii.
Miii.
Dismantling/Demolition (Future)
Di.
Dii.
Diii.

These notes are based on the use of experienced and competent contractors carrying out the work using an approved safe method of working.

NOTES

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INFORMATION

Rev	Date	Description	CAD	Chk	App
	20.07.2018	DCO Submission	-	-	-

nationalgrid

Site: NWC

Scheme Name: NORTH WALES CONNECTION

Document Title: PROPOSED HIGHWAYS MITIGATION MEASURES SECTION D - ACCESS D3 & D4 - B5420 - KEY PLAN

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PROPOSED START OF
30MPH SPEED LIMIT

Option to introduce no overtaking TRO

Reflective or solar studs within white lining

2.4m x 167m Visibility TAN 18 requirement

2.4m x 154m Visibility TAN18 requirement (wet weather adjusted)

Visibility restricted by crest in carriageway.
145m achieved - above TD9/93 absolute min. requirement

MYNEDFA WAITH
YN UNIG
200 llath
WORKS ACCESS
ONLY
200 yrds

OR
150yrds
100yrds

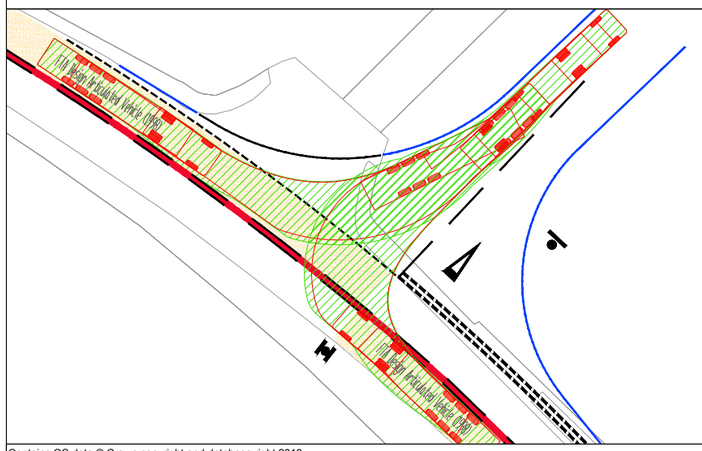
6m typical carriageway width
0.1m edge of carriageway marking
2.65m lane width
0.5m central hatching
2.65m lane width
0.1m edge of carriageway marking

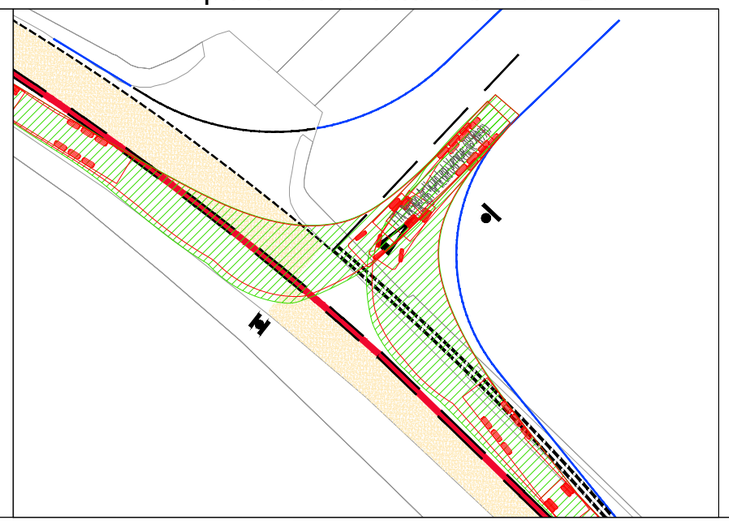
TRAFFIG GWAITH
YN UNIG
WORKS TRAFFIC
ONLY

TRAFFIG GWAITH
YN UNIG
WORKS TRAFFIC
ONLY

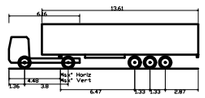
Mount on new post
or
Lighting column if required.
Option to reference access 'D3'

Overhead line compound
Access D3





MAX LEGAL LENGTH (UK) ARTICULATED VEHICLE



FTA Design Articulated Vehicle (1998)

Overall Length	16.480m
Overall Width	2.550m
Overall Body Height	3.870m
Min Body Ground Clearance	0.515m
Max Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	6.550m

0 12.5 25 m
1:500 @ A1, 1:1000 @ A3

NOTES

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INFORMATION

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	20.07.2018	DCO Submission	-	-	-

nationalgrid

Site: NWC

Scheme Name: NORTH WALES CONNECTION

Document Title: PROPOSED HIGHWAYS MITIGATION MEASURES
SECTION D - ACCESS D3 & D4

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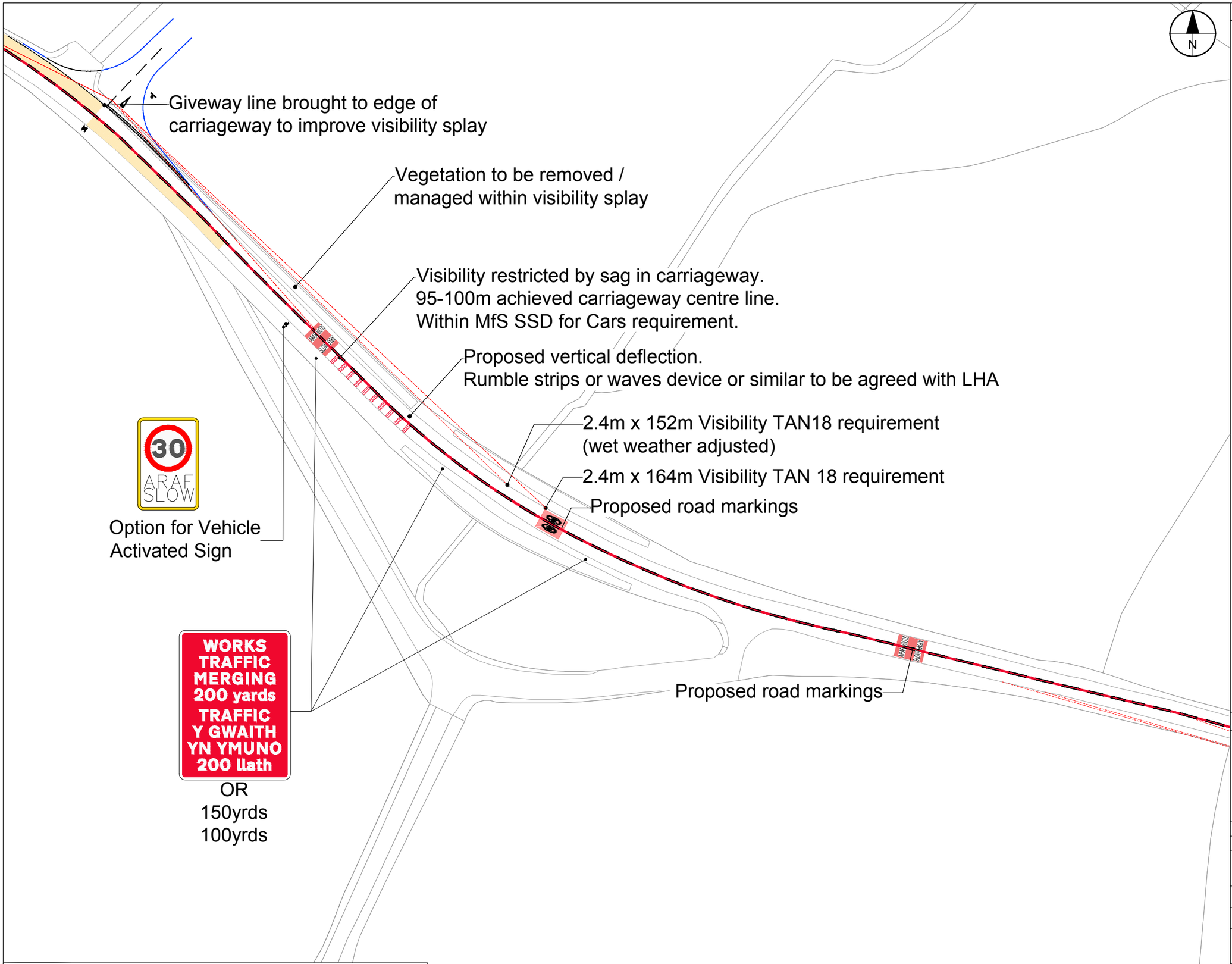

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	20.07.2018	DCO Submission	-	-	-

nationalgrid

Site: NWC

Scheme Name: NORTH WALES CONNECTION

Document Title: PROPOSED HIGHWAYS MITIGATION MEASURES SECTION D - ACCESS D3 & D4

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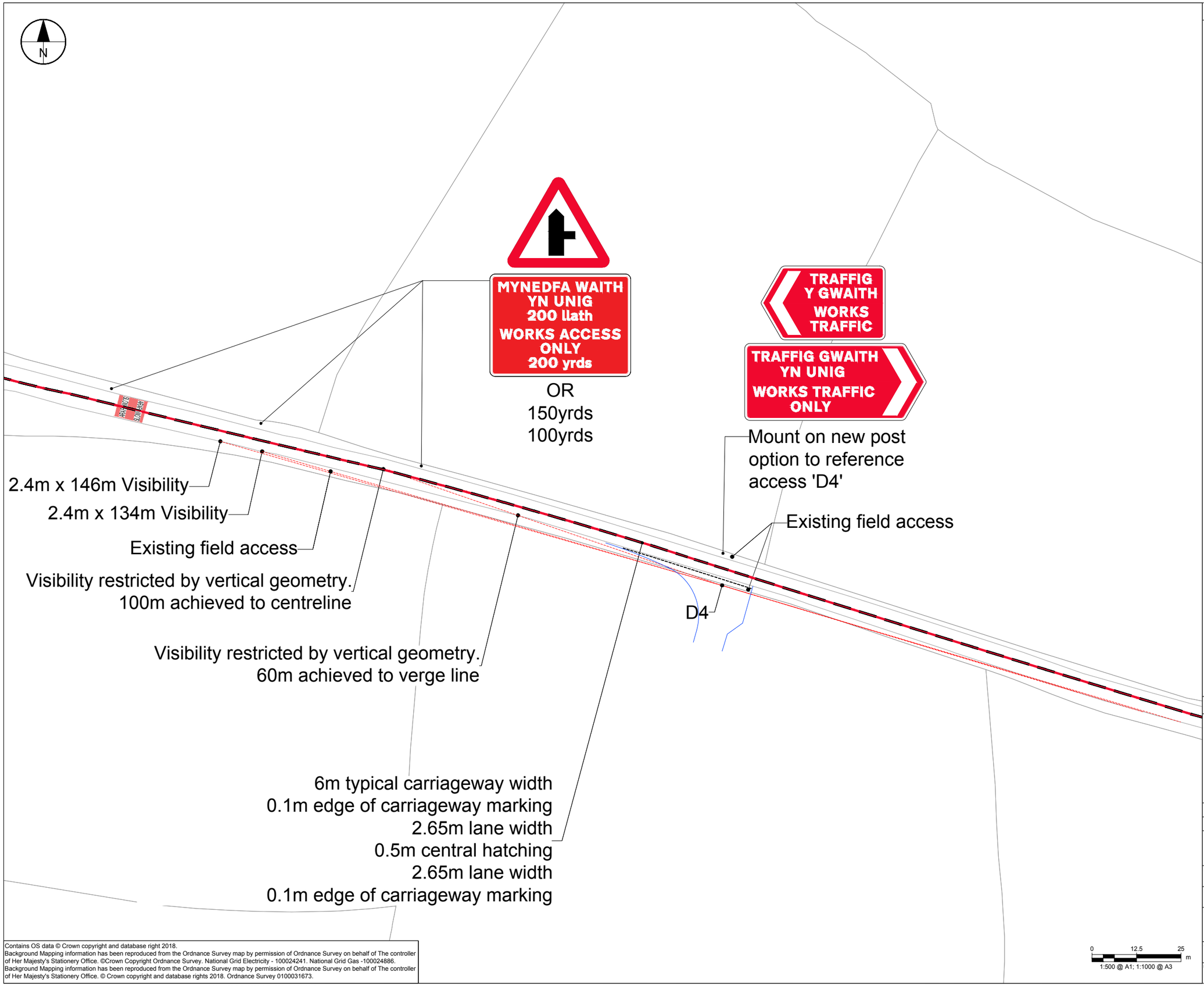

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nationalgrid

Site: NWC

Scheme Name: NORTH WALES CONNECTION

Document Title: PROPOSED HIGHWAYS MITIGATION MEASURES
SECTION D - ACCESS D3 & D4

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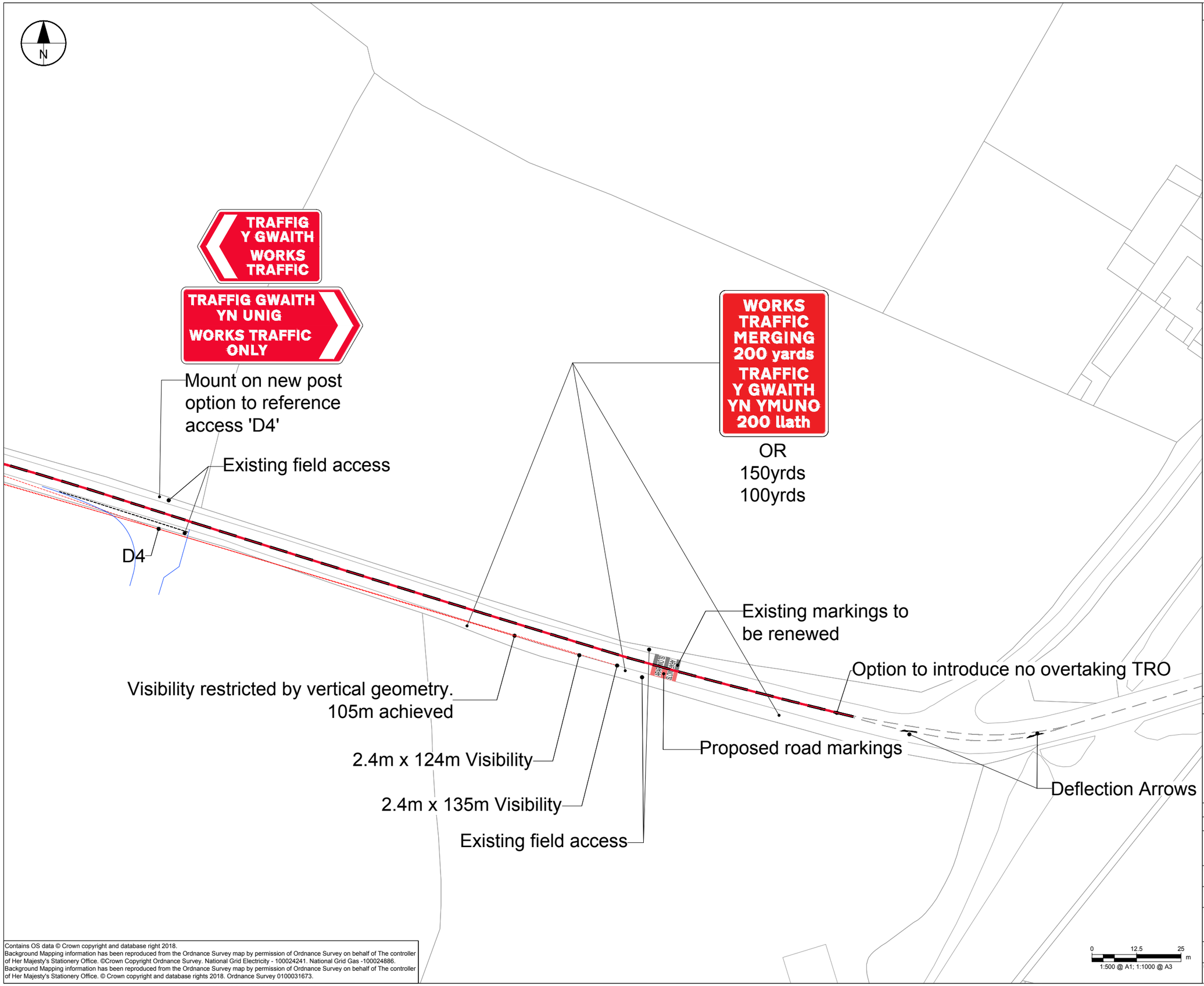

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Site: NWC

Scheme Name: NORTH WALES CONNECTION

Document Title: PROPOSED HIGHWAYS MITIGATION MEASURES
SECTION D - ACCESS D3 & D4

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PG	RT	AL	60514717-MM-105

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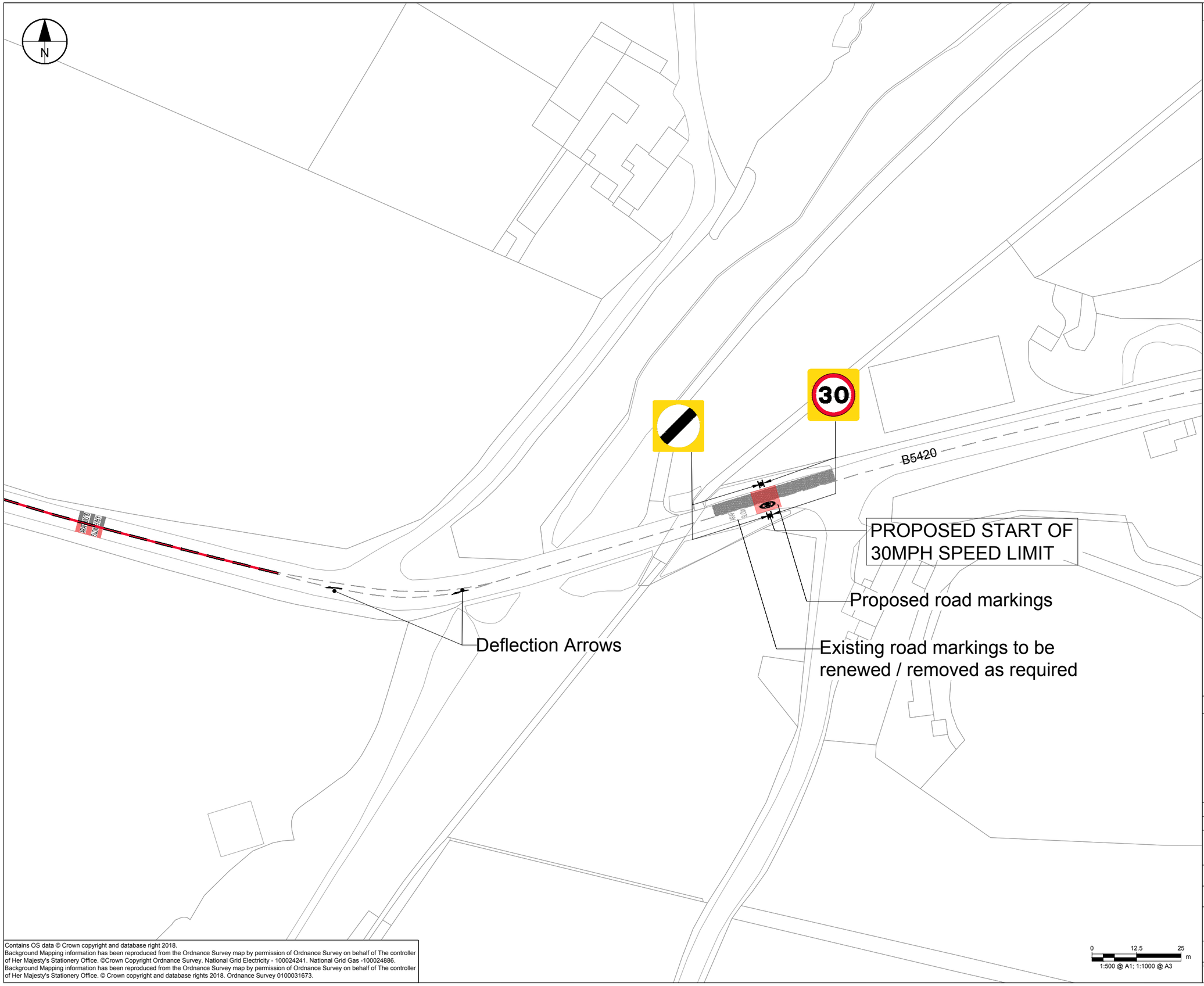

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Site: NWC

Scheme Name: NORTH WALES CONNECTION

Document Title: PROPOSED HIGHWAYS MITIGATION MEASURES
SECTION D - ACCESS D3 & D4

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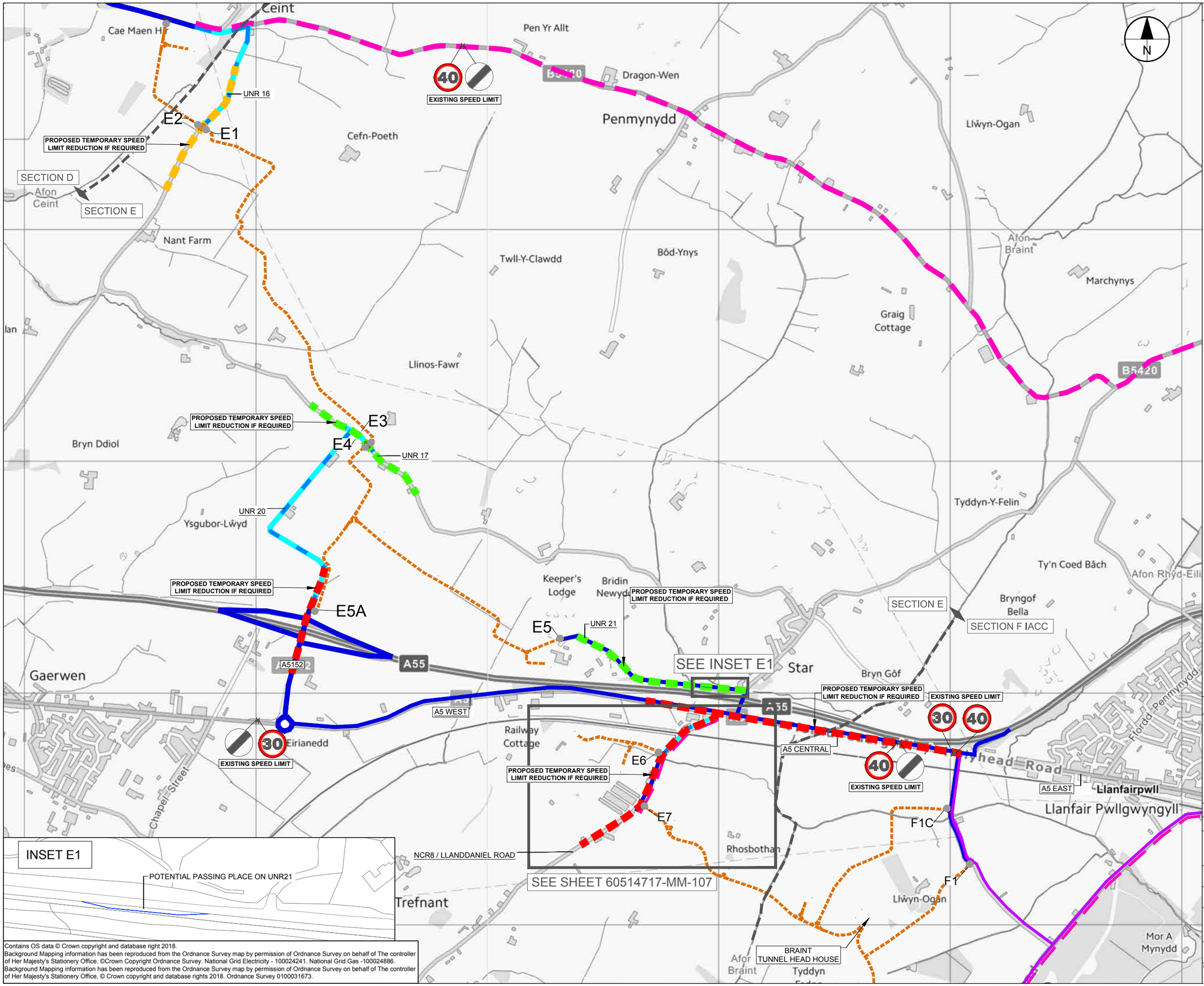

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Site: NWC

Scheme Name: NORTH WALES CONNECTION

Document Title: PROPOSED HIGHWAYS MITIGATION MEASURES SECTION E

Creator:	Checker:	Approver:	Sheet Number:
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INDICATIVE TEMPORARY TRAFFIC MANAGEMENT LAYOUT FOR A CONTINGENCY SITUATION

A5 / HOLYHEAD ROAD

LLANDANNIEL ROAD / NCN8

WINDOW E1

WINDOW E2

PORTABLE TRAFFIC SIGNAL

DIAG.543 & 543.1

DIAG.610

DIAG.7011

DIAG.517 & 518

ONE WAY WORKING 215m

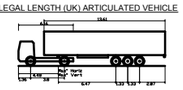
0 25 50 m
1:1000 @ A1; 1:2000 @ A3

WINDOW E3

0 12.5 25 m
1:500 @ A1; 1:1000 @ A3

INDICATIVE JUNCTION MODIFICATIONS FOR A CONTINGENCY SITUATION

MAX LEGAL LENGTH (UK) ARTICULATED VEHICLE



FTA Design Articulated Vehicle (1998)
Overall Length 16.50m
Overall Width 2.55m
Overall Body Height 3.97m
Min Body Ground Clearance 0.65m
Max Track Width 2.47m
Lock to Lock Time 7.00s
Kerb to Kerb Turning Radius 6.550m

E6

ACCESS TO 2 PYLONS

Mount on new post option to reference access 'E6'

SECTION B

SECTION A

TRAFFIG GWAITH YN UNIG
WORKS TRAFFIC ONLY

TRAFFIG Y GWAITH
WORKS TRAFFIC

GOFAL MYNEDFA I'RSAFLE
CAUTION SITE ENTRANCE

GOFAL LORIAU'N TROI
CAUTION LORRIES TURNING

Additional Hazard Warning Signs as required at site access

HGV ROUTE BETWEEN ACCESS E6 & E7

OPTION 1
MANAGE TRAFFIC VOLUME THROUGH PROGRAMME / CONTRACT.
USE OF TRAFFIC MARSHALS DURING MOVEMENTS

OPTION 2
SECTIONS OF CARRIAGEWAY WIDENING
TO 6.8m OR 6.1m

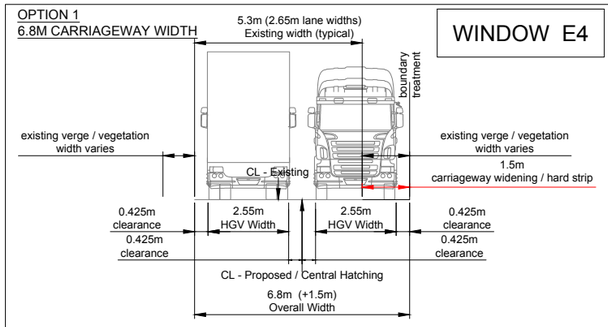
Mount on new post option to reference access 'E7'

E7

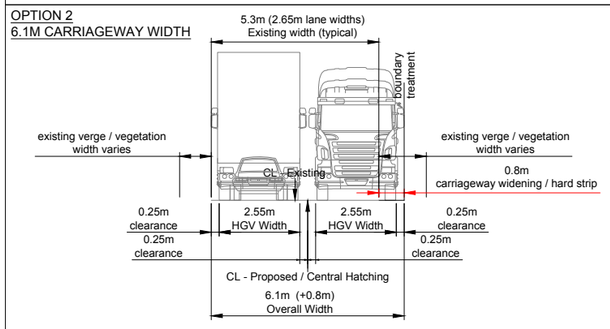
0 25 50 m
1:1000 @ A1; 1:2000 @ A3

WINDOW E4

OPTION 1
6.8M CARRIAGEWAY WIDTH



OPTION 2
6.1M CARRIAGEWAY WIDTH



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nationalgrid

Site: NWC

Scheme Name: NORTH WALES CONNECTION

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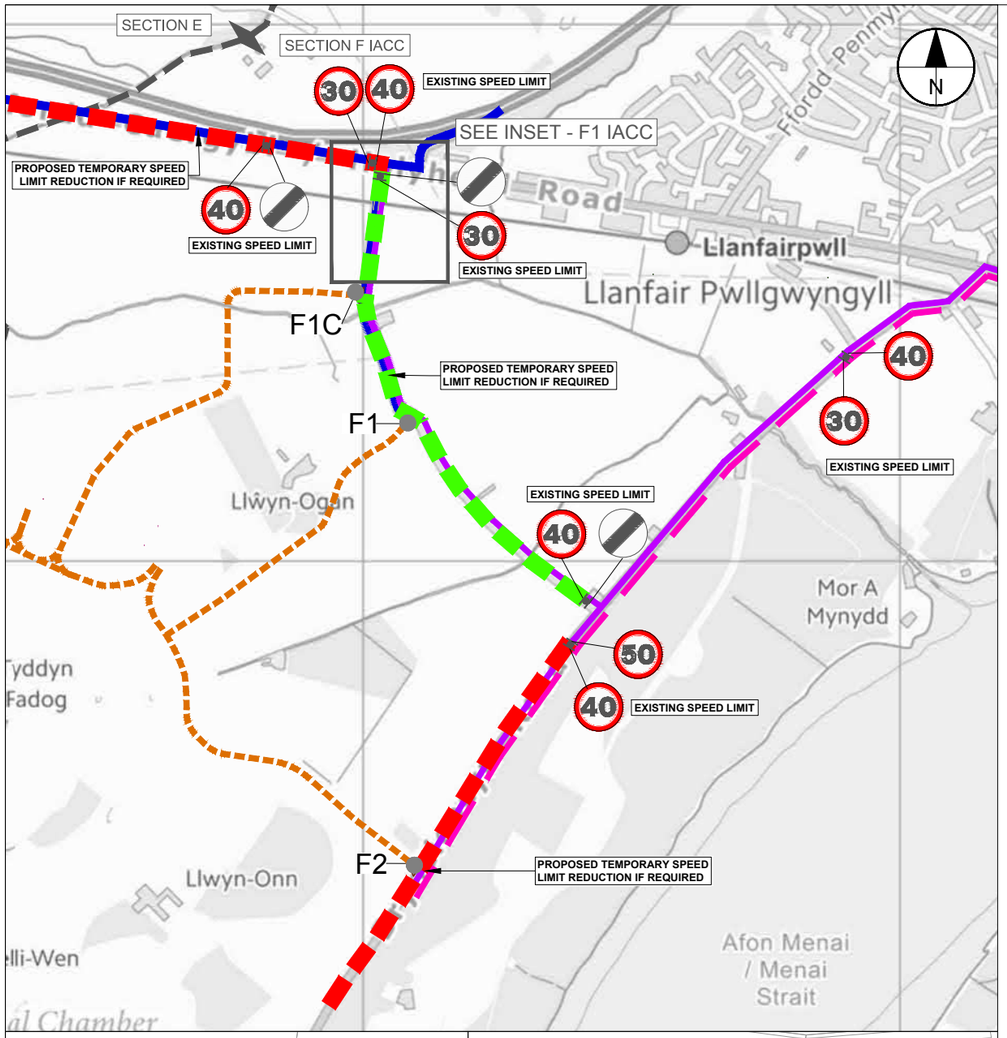
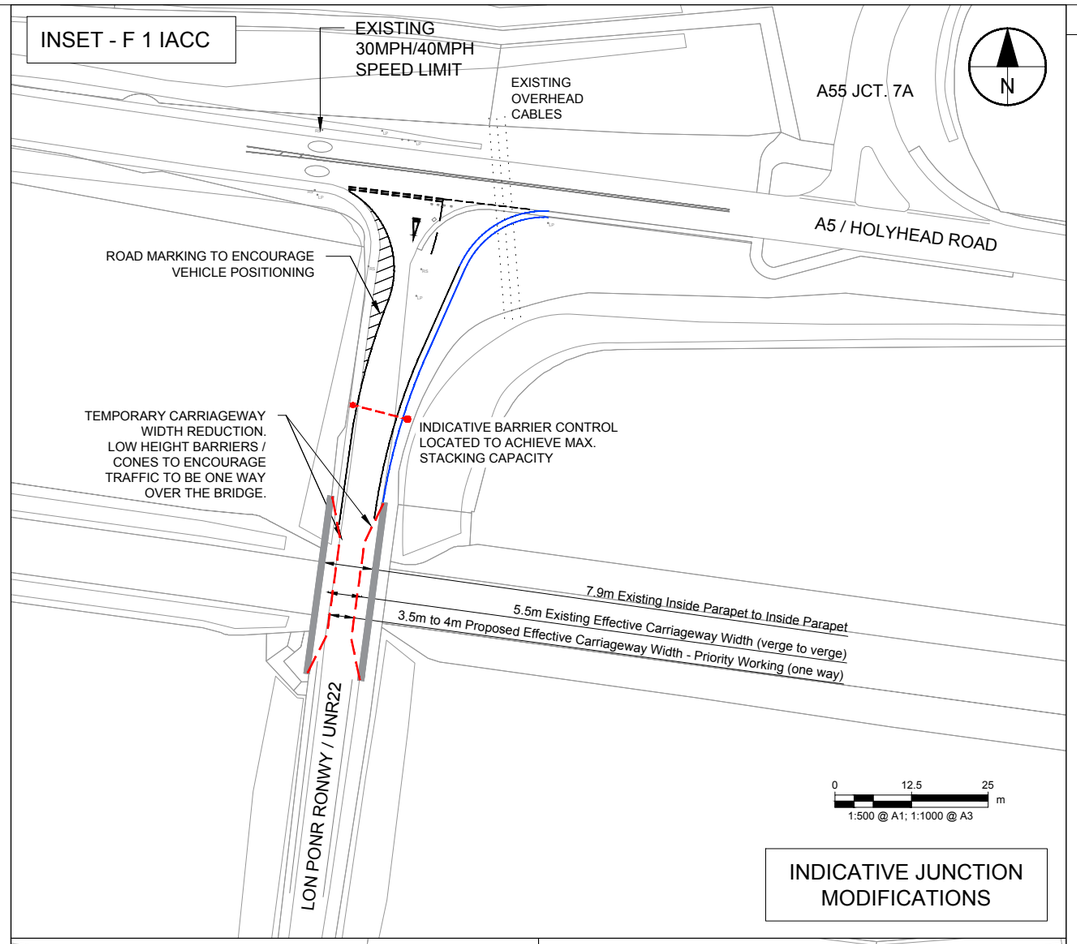




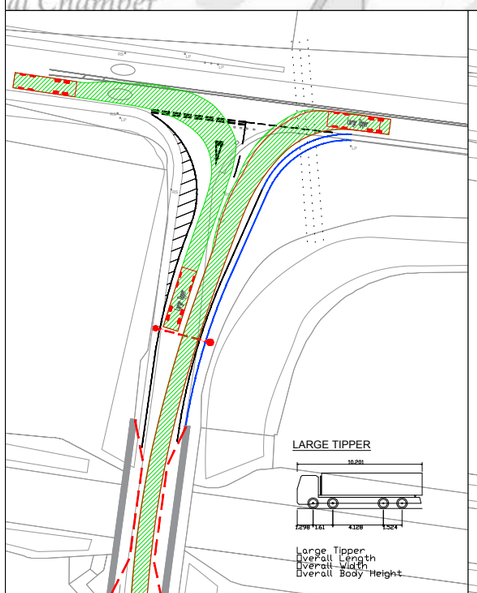
KEY

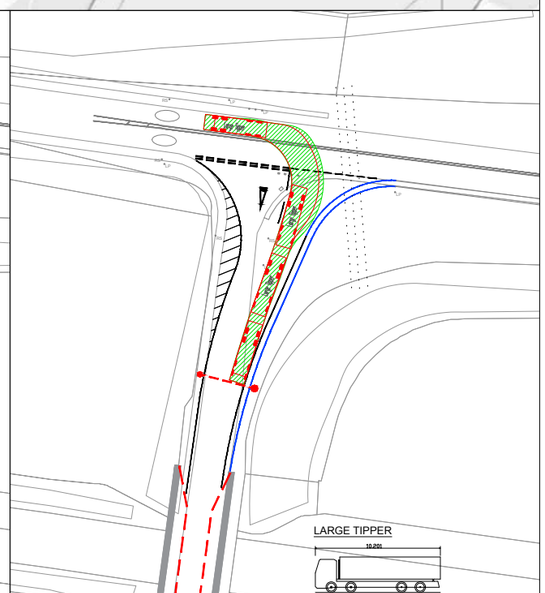
- PRIMARY LGV / HGV ROUTE
- PRIMARY LGV ROUTE
- LGV / TRACTOR TRAILER ROUTE
- LGV / HGV ENABLING WORKS ROUTE
- LGV / HGV CONTINGENCY ROUTE
- SITE ACCESS TRACKS
- SITE ACCESS POINT

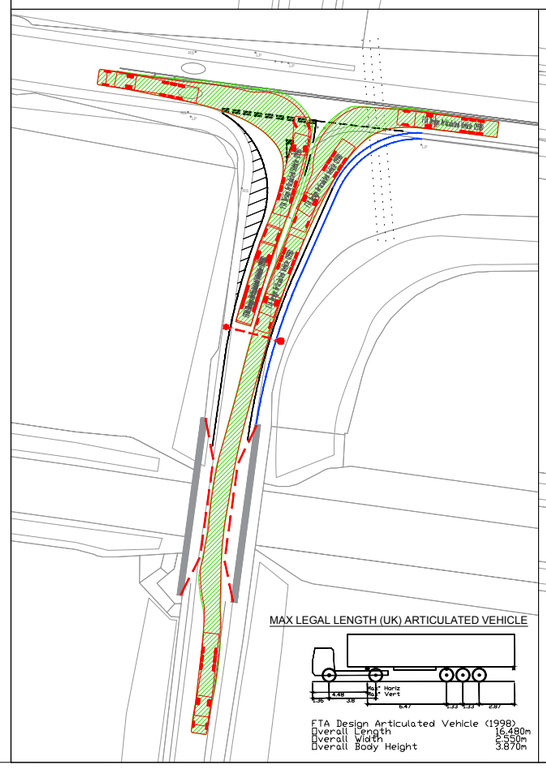
PROPOSED SPEED REDUCTION TRAFFIC REGULATION ORDER EXTENTS

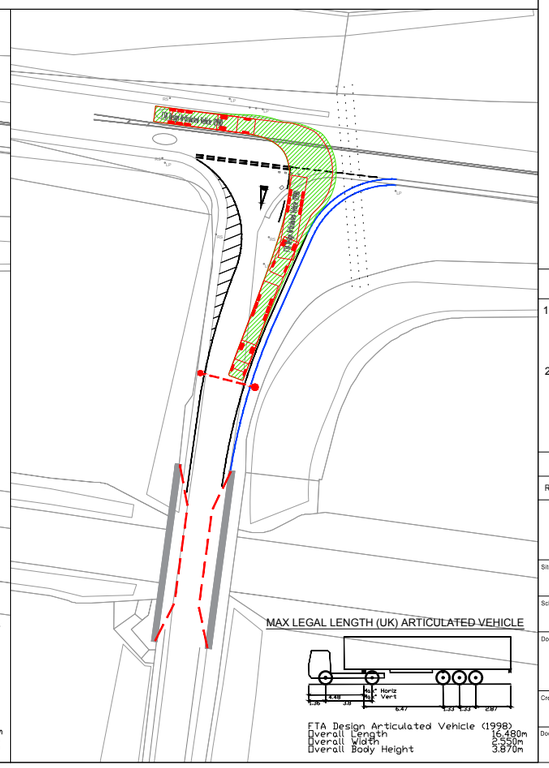
*RECORDED 85TH PERCENTILE SPEEDS
- <35MPH
- >35PMH <40MPH
- >40MPH

TYPICAL HAZARD WARNING SIGNS ON APPROACH TO AND AT WORKS ACCESS









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Rev	Date	Description	CAD	Chk	App
	20.07.2018	DCO Submission	-	-	-

nationalgrid

Site: NWC

Scheme Name: NORTH WALES CONNECTION

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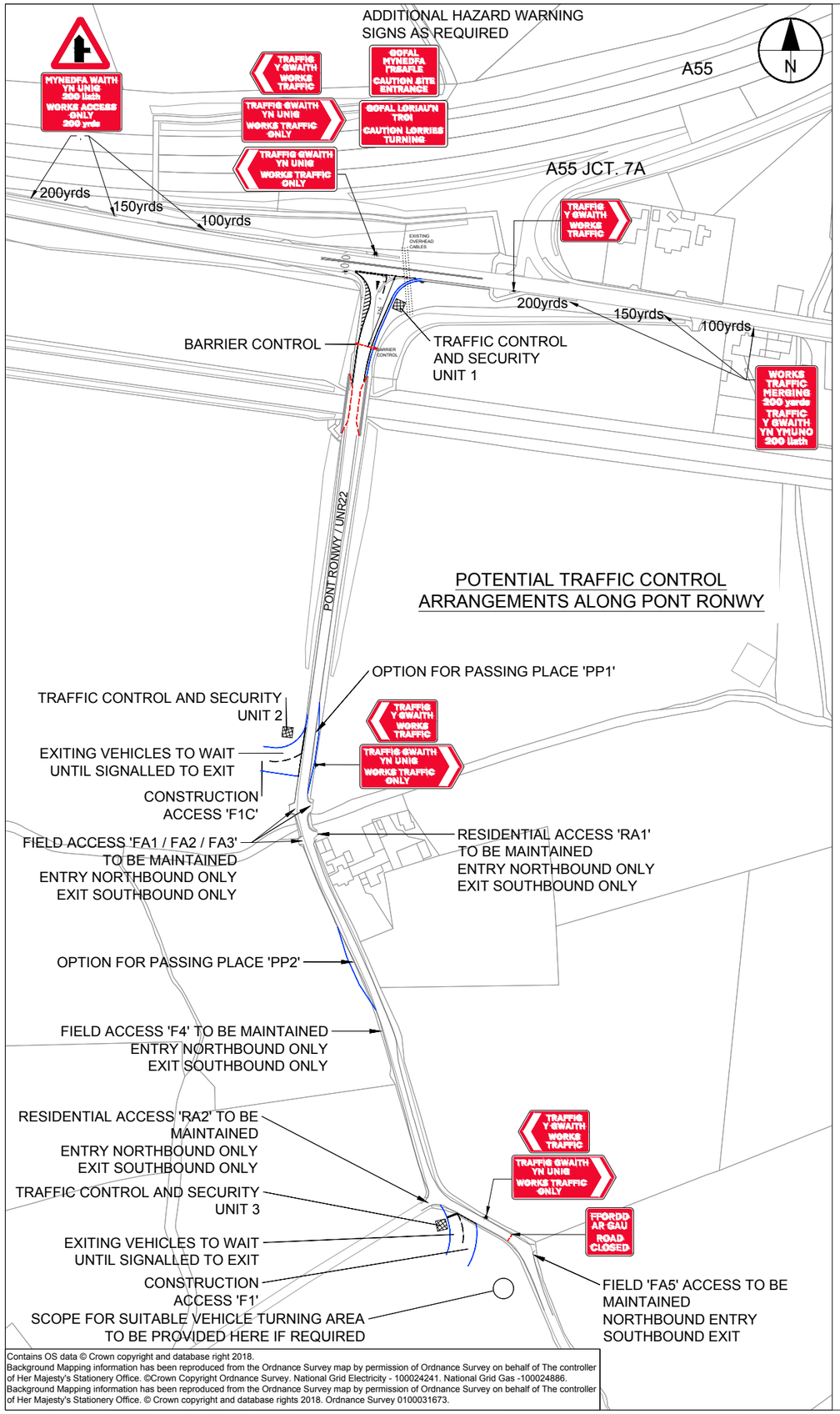

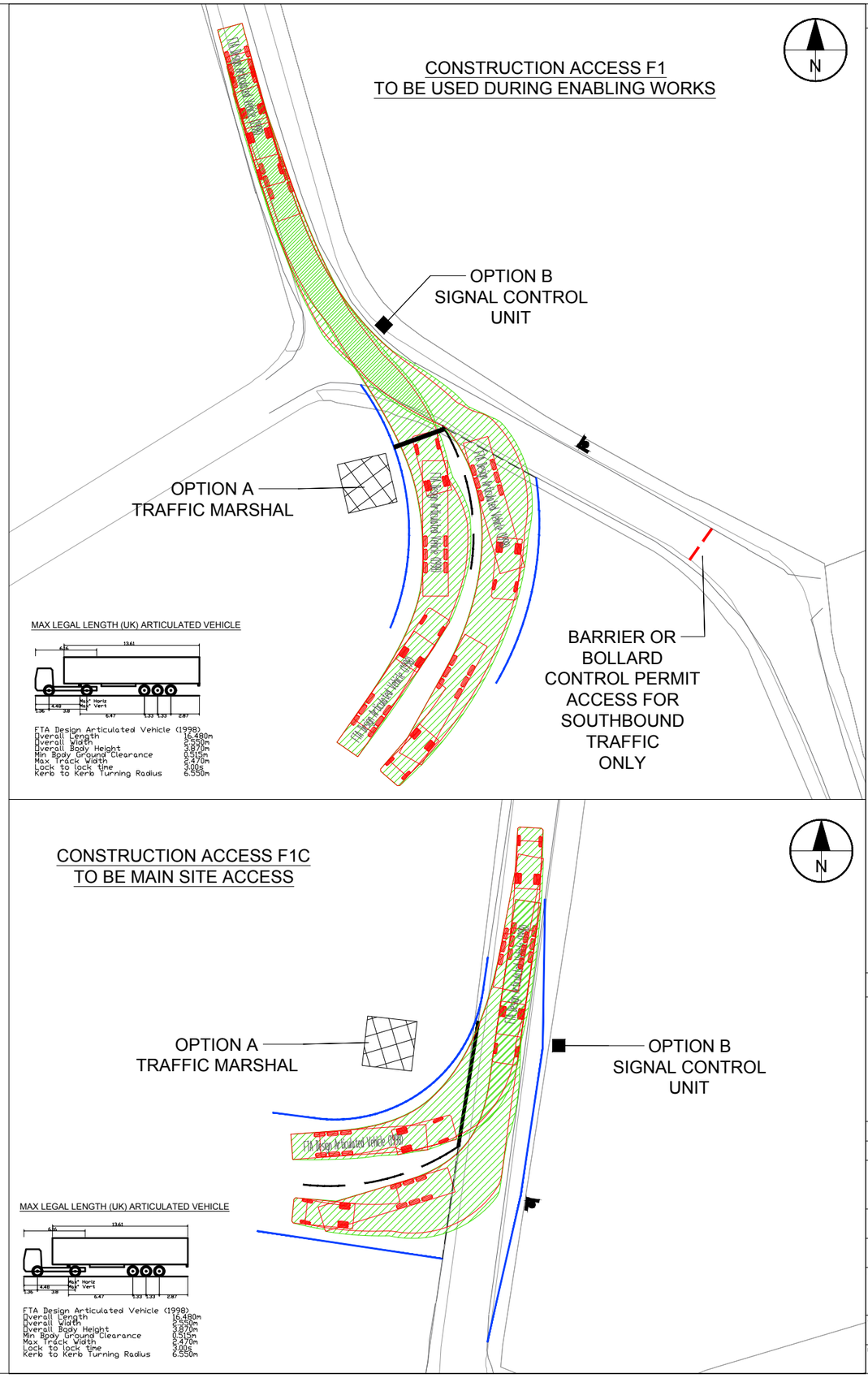

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INFORMATION

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	20.07.2018	DCO Submission	-	-	-

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Site: NWC

Scheme Name: NORTH WALES CONNECTION

Document Title: PROPOSED HIGHWAYS MITIGATION MEASURES SECTION F - ANGLESEY

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FIGURE	NTS	A1 / A3	1 of 1	-

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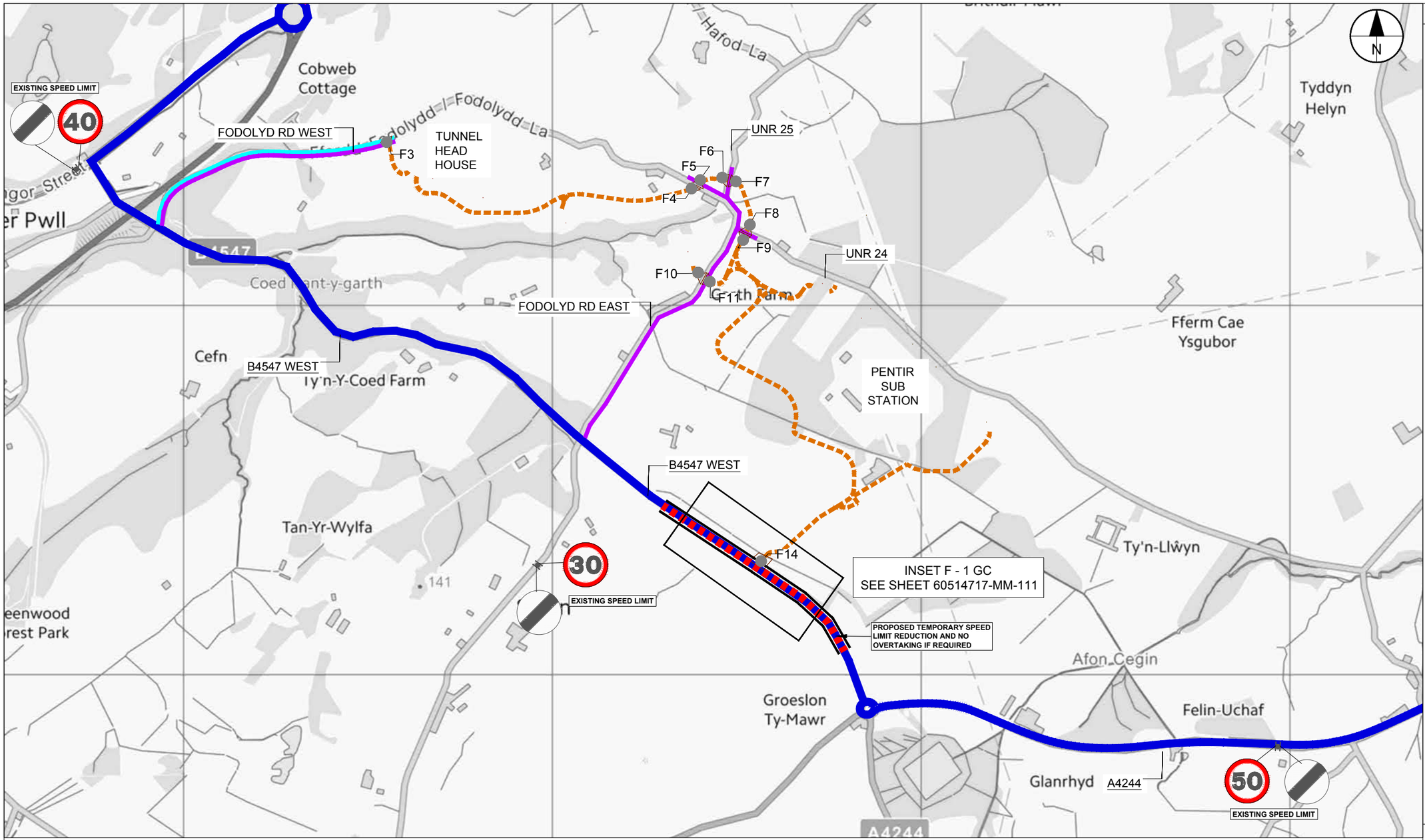

KEY

- PRIMARY LGV / HGV ROUTE
- PRIMARY LGV ROUTE
- LGV / TRACTOR TRAILER ROUTE
- LGV / HGV ENABLING WORKS ROUTE
- SITE ACCESS TRACKS
- SITE ACCESS POINT

PROPOSED SPEED REDUCTION TRAFFIC REGULATION ORDER EXTENTS

*RECORDED 85TH PERCENTILE SPEEDS
- <35MPH
- >35PMH <40MPH
- >40MPH

PROPOSED NO OVERTAKING TRAFFIC REGULATION ORDER EXTENTS

TYPICAL HAZARD WARNING SIGNS ON APPROACH TO AND AT WORKS ACCESS

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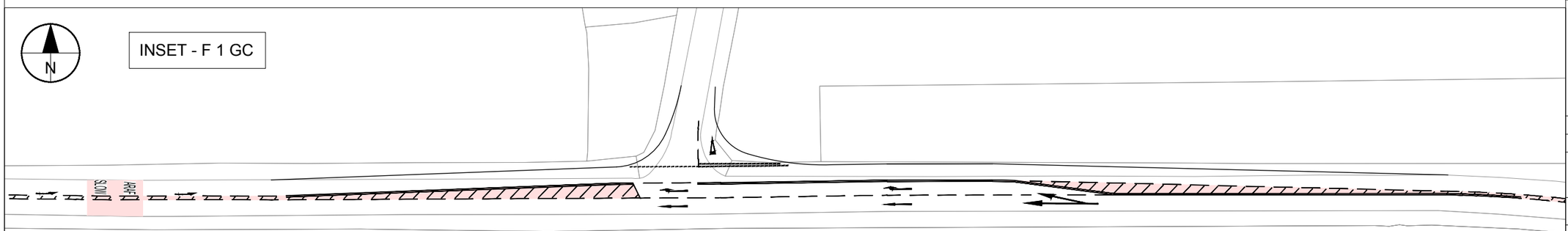

OPTION FOR RIGHT TURN LANE AT EXISTING PENTIR SUBSTATION ACCESS

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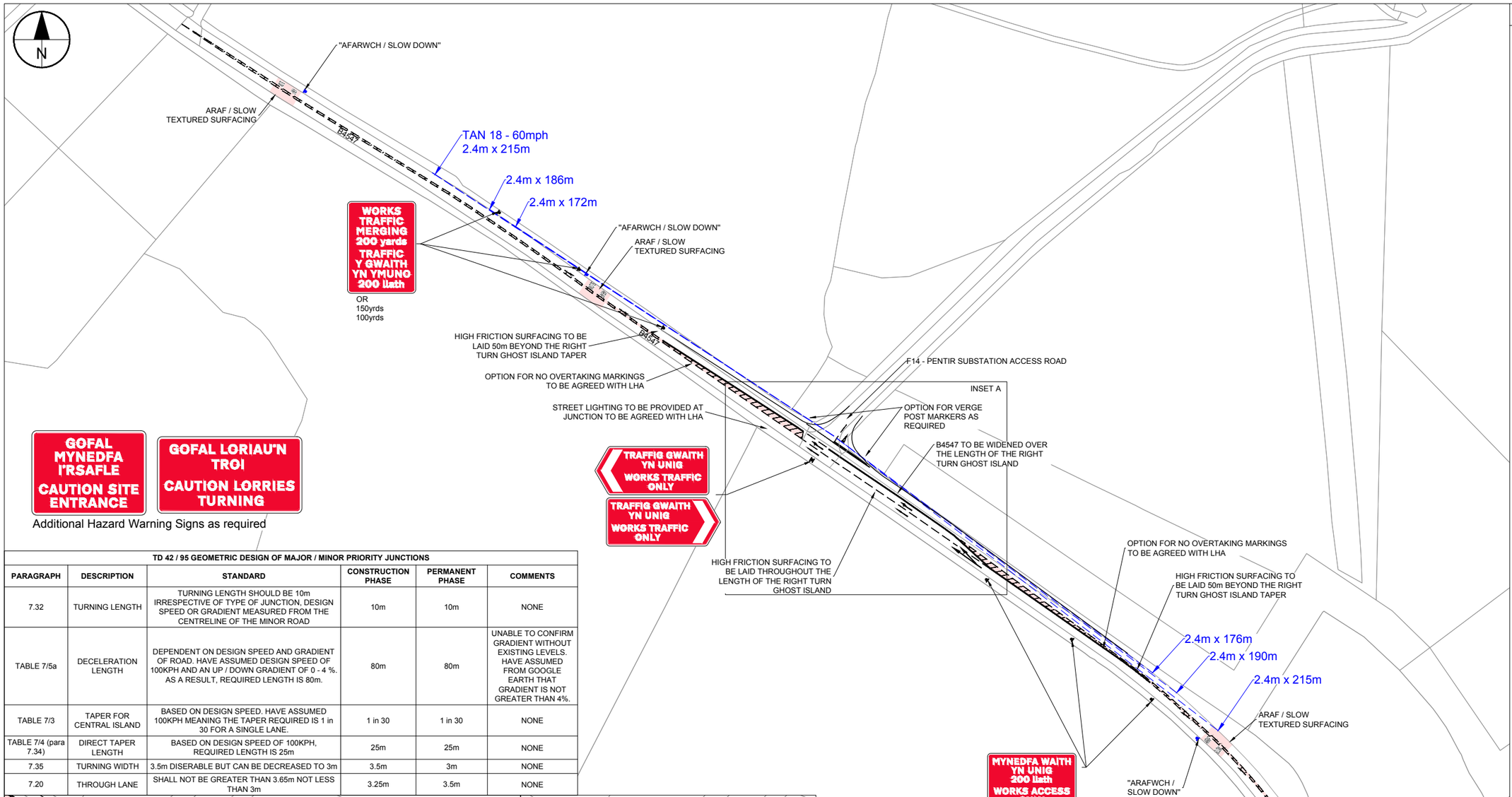


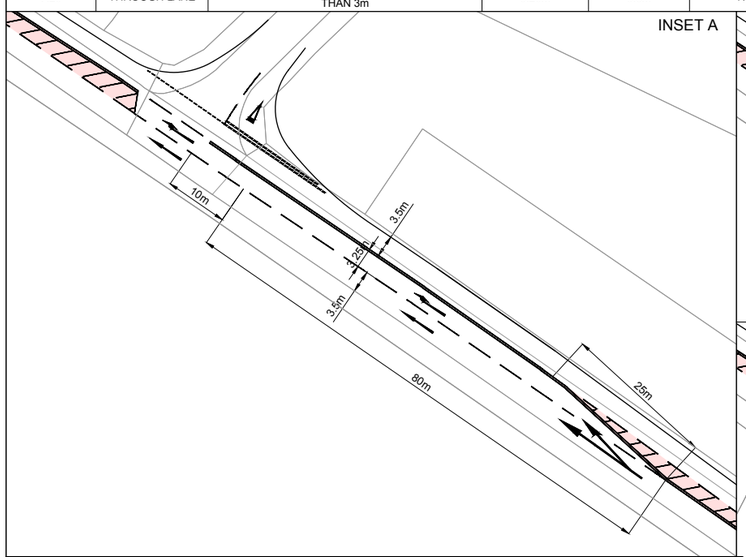
GOFAL MYNEDFA I'RSAFLE
CAUTION SITE ENTRANCE

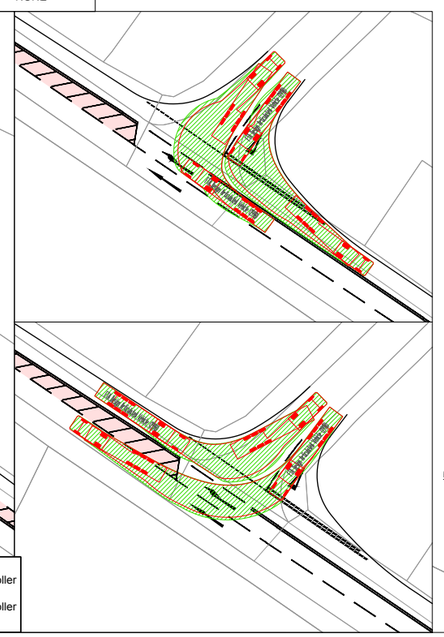
GOFAL LORIAU'N TROI
CAUTION LORRIES TURNING

Additional Hazard Warning Signs as required

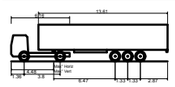
TD 42 / 95 GEOMETRIC DESIGN OF MAJOR / MINOR PRIORITY JUNCTIONS

PARAGRAPH	DESCRIPTION	STANDARD	CONSTRUCTION PHASE	PERMANENT PHASE	COMMENTS
7.32	TURNING LENGTH	TURNING LENGTH SHOULD BE 10m IRRESPECTIVE OF TYPE OF JUNCTION, DESIGN SPEED OR GRADIENT MEASURED FROM THE CENTRELINE OF THE MINOR ROAD	10m	10m	NONE
TABLE 7/5a	DECELERATION LENGTH	DEPENDENT ON DESIGN SPEED AND GRADIENT OF ROAD. HAVE ASSUMED DESIGN SPEED OF 100KPH AND AN UP / DOWN GRADIENT OF 0 - 4 %. AS A RESULT, REQUIRED LENGTH IS 80m.	80m	80m	UNABLE TO CONFIRM GRADIENT WITHOUT EXISTING LEVELS. HAVE ASSUMED FROM GOOGLE EARTH THAT GRADIENT IS NOT GREATER THAN 4%.
TABLE 7/3	TAPER FOR CENTRAL ISLAND	BASED ON DESIGN SPEED. HAVE ASSUMED 100KPH MEANING THE TAPER REQUIRED IS 1 in 30 FOR A SINGLE LANE.	1 in 30	1 in 30	NONE
TABLE 7/4 (para 7.34)	DIRECT TAPER LENGTH	BASED ON DESIGN SPEED OF 100KPH, REQUIRED LENGTH IS 25m	25m	25m	NONE
7.35	TURNING WIDTH	3.5m DISERABLE BUT CAN BE DECREASED TO 3m	3.5m	3m	NONE
7.20	THROUGH LANE	SHALL NOT BE GREATER THAN 3.65m NOT LESS THAN 3m	3.25m	3.5m	NONE





MAX LEGAL LENGTH (UK) ARTICULATED VEHICLE



OVERALL LENGTH	16.480m
OVERALL WIDTH	2.550m
OVERALL BODY HEIGHT	3.870m
MIN BODY GROUND CLEARANCE	0.515m
MAX TRACK WIDTH	2.470m
LOCK TO LOCK TIME	3.00s
KERB TO KERB TURNING RADIUS	6.550m

STREET LIGHTING ASSESSMENT SHOULD BE CARRIED OUT TO ENSURE LIGHTING LEVELS ARE ADEQUATE IN AND AROUND THE PROPOSED ACCESS, ENSURING THE ACCESS AND ALL ROAD USERS ARE VISIBLE DURING THE HOURS OF DARKNESS.

ALL TREE FOLIAGE AND VEGETATION TO BE REGULARLY CUT BACK BY APPOINTED CONTRACTOR TO ENSURE VISIBILITY OF ACCESSES AND ASSOCIATED SIGNAGE ARE MAINTAINED.

NOTES

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North Wales Connection Project

Transport Assessment – ANNEX N

Operation and Maintenance Access

National Grid
National Grid House
Warwick Technology Park
Gallows Hill
Warwick
CV34 6DA

Final September 2018

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Document Control			
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Author	Phil Gibbon		
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Contents

1 Introduction 1

1.1 Introduction 1

2 Operation and Maintenance 2

2.2 Anticipated THH Operation and Maintenance Requirements 3

2.3 Swept Path Analysis 4

Appendix A – Swept Path Analysis 6

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1 Introduction

1.1 INTRODUCTION

1.1.1 This note has been prepared to outline the proposed permanent vehicular access arrangements for operation and maintenance at the Braint and Ty Fodol tunnel head houses (THHs).

2 Operation and Maintenance

Summary

2.1.1 Table 1 below summarises the proposed vehicle access routes to the Braint and Ty Fodol THHs via the local road network (LRN).

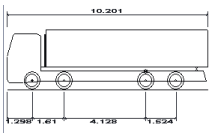
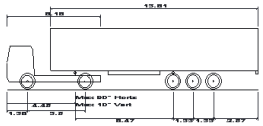
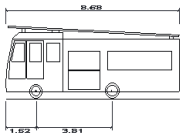
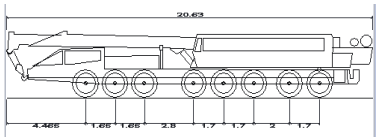
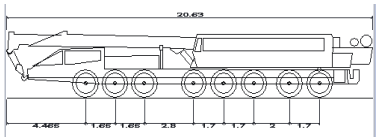
Table 1 : Proposed Tunnel Head House (THH) Operation and Maintenance Access

Scenario	Braint THH -	Ty Fodol THH -
3- 6 month regular inspection	Via Unnamed Road 22 / Pont Ronwy access F1 or existing modified access	Via Fodolydd Lane west access F3
10/20 year event		
Emergency		
40 year event	Via Unnamed Road 22 / Pont Ronwy access F1 or existing modified access or A4080 access F2	Via Fodolydd Lane west access F3 or Fodolydd Lane east access F4
Unplanned event		

2.2 ANTICIPATED THH OPERATION AND MAINTENANCE REQUIREMENTS

2.2.1 Table 2 below details the types of vehicles required for anticipated operation and maintenance events at the tunnel head houses.

Table 2: Anticipated Vehicles for THH Operation And Maintenance

Scenario	Access Requirement	Assumed 'worst – case' vehicle
3- 6 month event Regular inspection/maintenance	LGV – Transit van / pickup truck (or similar) HGV – Sewage tanker (or similar)	 Large Tipper Overall Length 10.201m Overall Width 2.500m Overall Body Height 2.893m Min Body Ground Clearance 0.343m Max Track Width 2.500m Lock-to-lock time 6.00s Curb to Curb Turning Radius 11.550m
1 in 10 or 20 + year event repair/replace equipment	HGV - (Flatbed with crane type vehicle/HIAB lorry or similar)	 FTA Design Articulated Vehicle (1998) Overall Length 16.480m Overall Width 2.550m Overall Body Height 3.870m Min Body Ground Clearance 0.515m Max Track Width 2.470m Lock-to-lock time 3.00s Curb to Curb Turning Radius 6.550m
Emergency event	Fire / Ambulance service vehicles	 DB32 Fire Appliance Overall Length 8.680m Overall Width 2.180m Overall Body Height 3.452m Min Body Ground Clearance 0.337m Max Track Width 2.121m Lock-to-lock time 6.00s Curb to Curb Turning Radius 7.910m
1 in 40 years event	HGV – Rigid crane mounted flatbed/cranes	 400T Mobile Crane Overall Length 20.630m Overall Width 3.000m Overall Body Height 3.536m Min Body Ground Clearance 0.740m Max Track Width 3.000m Lock-to-lock time 6.00s Wall to Wall Turning Radius 16.500m
Unplanned event repair/replace equipment	HGV – Rigid crane mounted flatbed/cranes Abnormal Indivisible Load (AIL)	 400T Mobile Crane Overall Length 20.630m Overall Width 3.000m Overall Body Height 3.536m Min Body Ground Clearance 0.740m Max Track Width 3.000m Lock-to-lock time 6.00s Wall to Wall Turning Radius 16.500m

2.3 SWEPT PATH ANALYSIS

2.3.1 The information contained in Table 1 has been used to undertake vehicle swept path analysis (SPA) on the LRN to the THH sites. The SPA drawings are included in Appendix A of this technical note and are listed in Table 2:

Table 3: Swept Path Analysis

Braint THH - IACC	Drawing Number
3/6 month event route to access F1 or modified existing access	60514717-OM-001
1 in 10 or 20 year event route to access F1 or modified existing access	60514717-OM-002
1 in 40 year or unplanned event route to access F1 or modified existing access	60514717-OM-003
1 in 40 year or unplanned event route to access F2	60514717-OM-004
Emergency event route to access F1 or modified existing access	60514717-OM-005
Ty Fodol THH– IACC	Drawing Number
3/6 month event route to access F3	60514717-OM-006
3/6 month event route to access F4	60514717-OM-007
1 in 10 or 20 year event route to access F3	60514717-OM-008
1 in 10 or 20 Year event route to access F4	60514717-OM-009
1 in 40 year or unplanned event route to access F3	60514717-OM-010
1 in 40 year or unplanned event route to access F4	60514717-OM-011
Emergency event route to access F3	60514717-OM-012

Braint Swept Path Analysis

2.3.2 Typical operation and maintenance vehicles would access the Braint THH via Pont Ronwy/Unnamed Road 22 (UNR 22) and access F1 or a modified existing access.

2.3.3 Any vehicle which could not use this route would access the site via the A4080 and access F2 with a temporary trackway installed between access F2 and the site for the movement(s).

Ty Fodol Swept Path Analysis

2.3.4 Typical operation and maintenance vehicles would access the Ty Fodol THH via Fodolydd Lane west and access F3. Any vehicle which could not use this route would access the site via Fodolydd Lane east and access F4 with a temporary trackway installed between access F4 and the site for the movement(s).

2.3.5 Drawing 60514717-OM-006 shows the SPA on Ordnance Survey (OS) mapping for a 20 tonne tipper vehicle to access F3 via Fodolydd Lane west. The SPA shows that carriageway widening would be required. However, similar type vehicles used for carrying out site investigation works have already achieved this movement and therefore it is anticipated that any carriageway widening would not be required here for 3 to 6 month operation and maintenance events.

2.3.6 Drawing 60514717-OM-008 shows the SPA on OS mapping for a 16.5m articulated vehicle to access F3 via Fodolydd Lane west. The SPA shows that carriageway widening and a form of retaining structure would be required to achieve the manoeuvre. The carriageway widening here would require removal of a small section of ancient woodland therefore the route to access F4 via Fodolydd Lane east and temporary trackway or even an alternative vehicle configuration which is able negotiate the route to access F3 without carriageway widening should be considered to reduce the environmental effects.

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Appendix A – Swept Path Analysis

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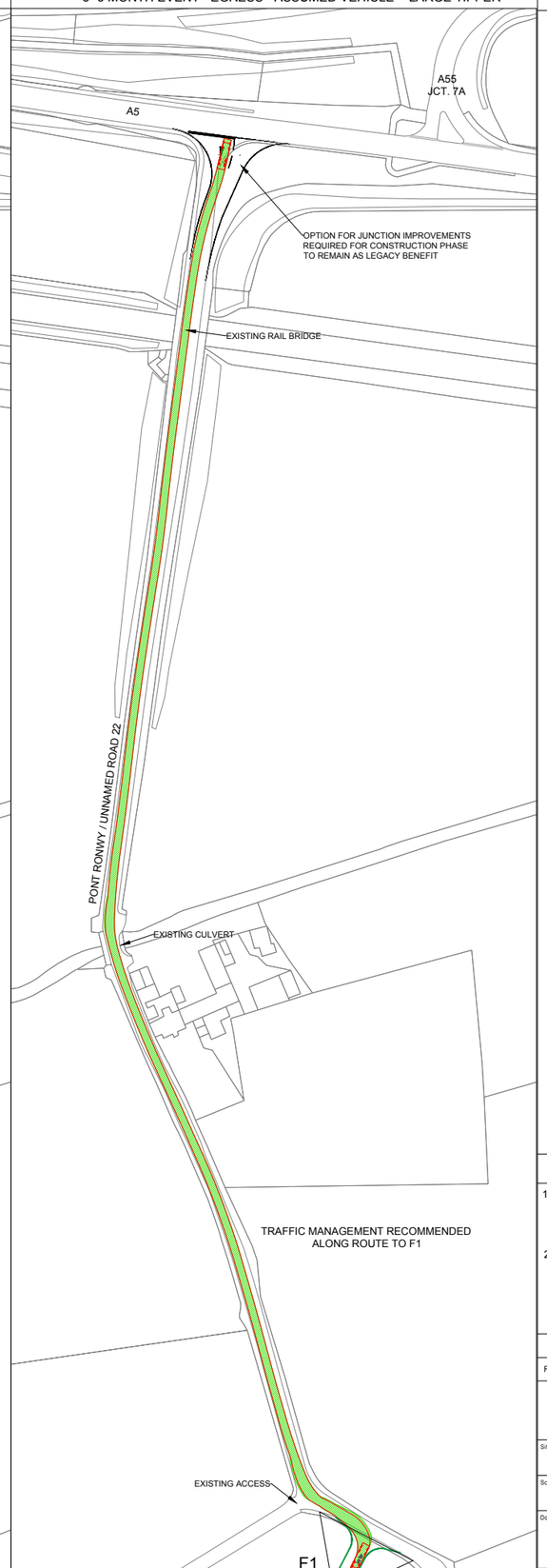
3-6 MONTH EVENT - ACCESS ASSUMED VEHICLE TRANSIT VAN

3-6 MONTH EVENT - EGRESS ASSUMED VEHICLE TRANSIT VAN

3- 6 MONTH EVENT - ACCESS - ASSUMED VEHICLE - LARGE TIPPER

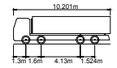
3- 6 MONTH EVENT - EGRESS - ASSUMED VEHICLE - LARGE TIPPER



SWEPT PATH PROFILE - 7.5T PANEL VAN

OVERALL LENGTH	7.210m
OVERALL WIDTH	2.192m
OVERALL BODY HEIGHT	2.544m
MIN BODY GROUND CLEARANCE	0.316m
TRACK WIDTH	1.865m
LOCK TO LOCK TIME	4.00s
KERB TO KERB TURNING RADIUS	7.400m

SWEPT PATH PROFILE - LARGE TIPPER



OVERALL LENGTH	10.201m
OVERALL WIDTH	2.500m
OVERALL BODY HEIGHT	2.893m
MIN BODY GROUND CLEARANCE	0.343m
MAX TRACK WIDTH	2.500m
LOCK TO LOCK TIME	6.00s
KERB TO KERB TURNING RADIUS	11.550m

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Scheme Name: NORTH WALES CONNECTION

Document Title: BRAINT PERMANENT ACCESS SWEPT PATH ANALYSIS

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Document Type:	Scale	Format	Sheets:	Rev:
FIGURE	NTS	A1 / A3	1 of 1	-

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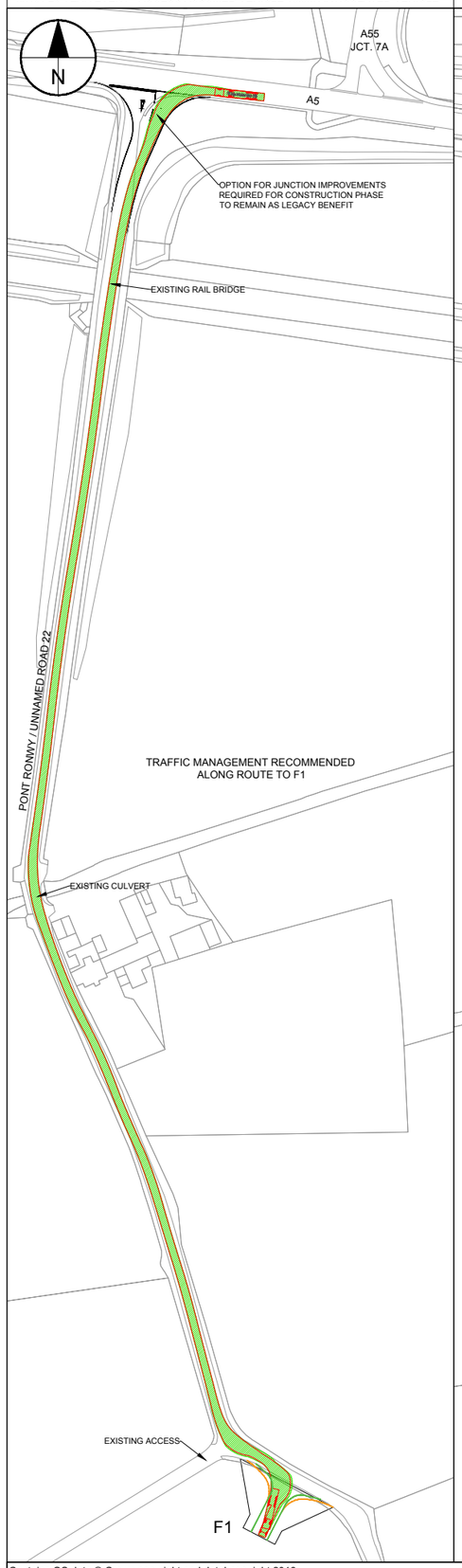
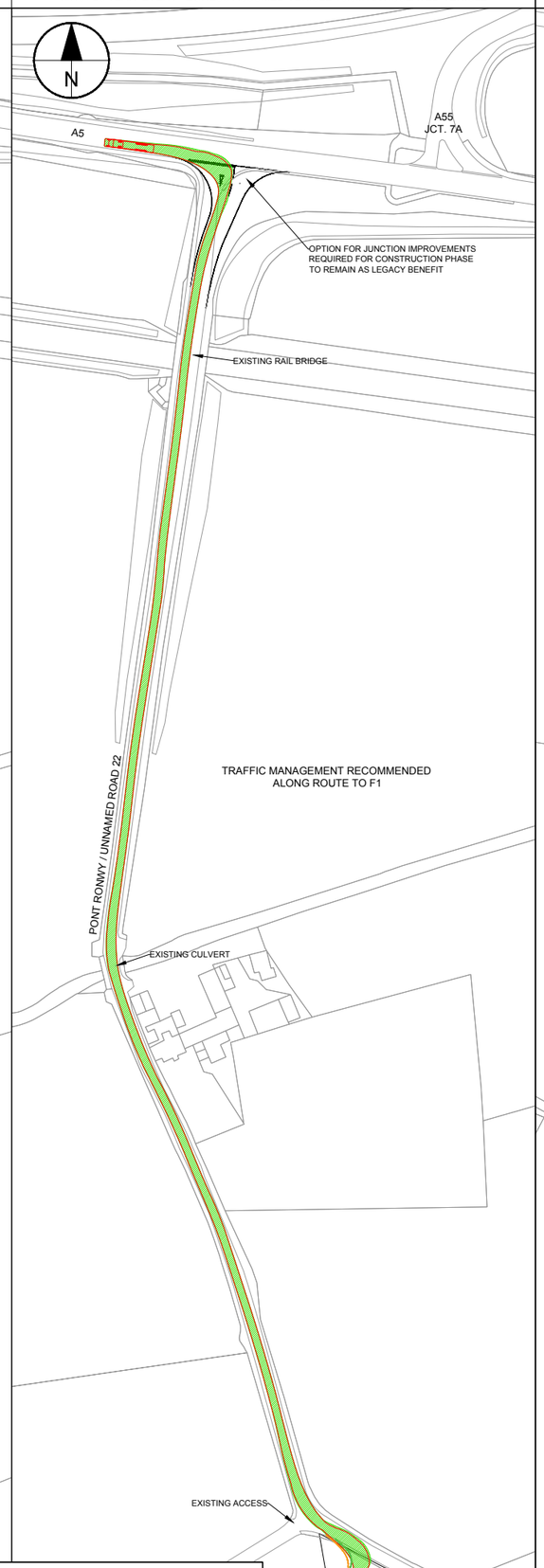
1in10 / 20 YEAR EVENT - ACCESS ASSUMED VEHICLE 16.5m ARTICULATED VEHICLE



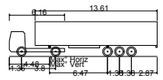
1in10 / 20 YEAR EVENT - EGRESS ASSUMED VEHICLE 16.5m ARTICULATED VEHICLE



1in10 / 20 YEAR EVENT- ACCESS ASSUMED VEHICLE 16.5m ARTICULATED VEHICLE

1in10 / 20 YEAR EVENT- EGRESS ASSUMED VEHICLE 16.5m ARTICULATED VEHICLE

SWEPT PATH PROFILE - 16.5m ARTICULATED VEHICLE



ETA Design Articulated Vehicle (1998)

Overall Length	16.480m
Overall Width	2.500m
Overall Body Height	3.810m
Min Body Ground Clearance	0.410m
Max Track Width	2.500m
Lock to Lock Time	4.0s
Kerb to Kerb Turning Radius	8.950m

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FIGURE	NTS	A1 / A3	1 of 1	-

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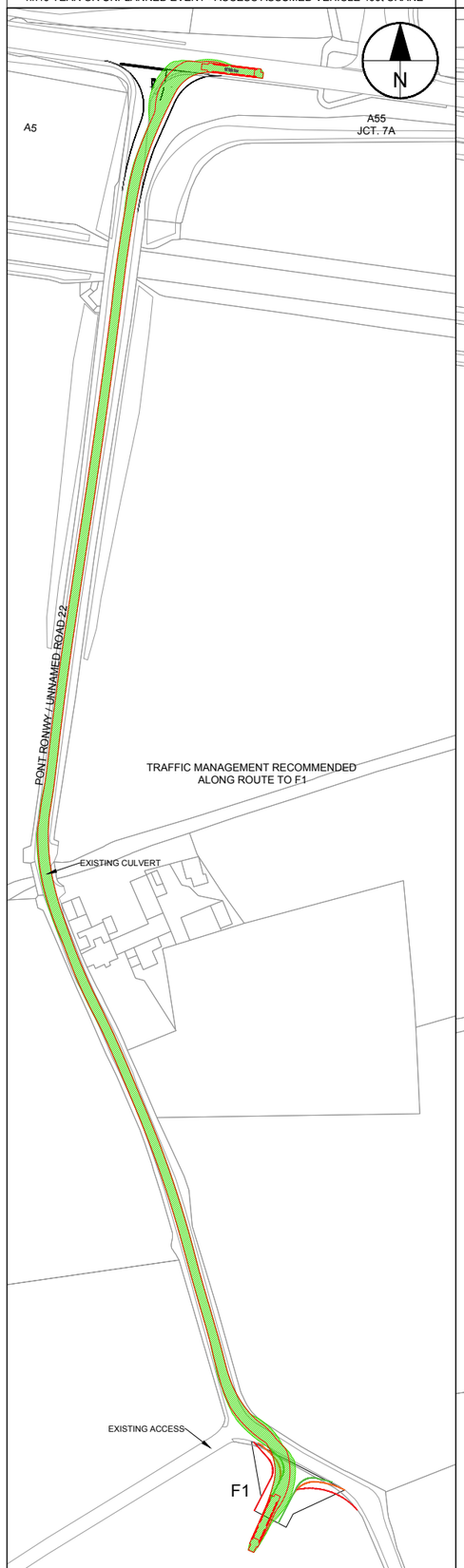
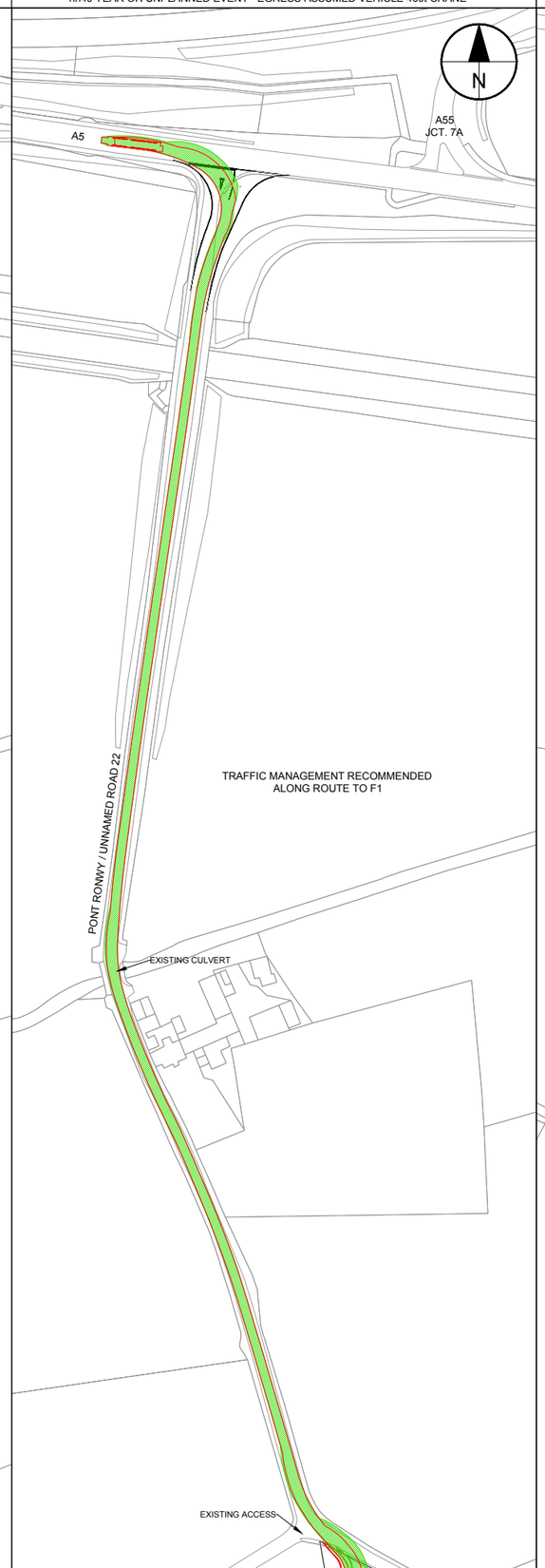
1in40 YEAR OR UNPLANNED EVENT - ACCESS ASSUMED VEHICLE 400t CRANE



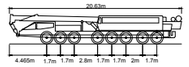
1in40 YEAR OR UNPLANNED EVENT - EGRESS ASSUMED VEHICLE 400t CRANE



1in40 YEAR OR UNPLANNED EVENT - ACCESS ASSUMED VEHICLE 400t CRANE

1in40 YEAR OR UNPLANNED EVENT- EGRESS ASSUMED VEHICLE 400t CRANE

SWEPT PATH PROFILE - 400T MOBILE CRANE



OVERALL LENGTH	20.630m
OVERALL WIDTH	3.000m
OVERALL BODY HEIGHT	3.536m
MIN BODY GROUND CLEARANCE	0.740m
MAX TRACK WIDTH	3.000m
LOCK TO LOCK TIME	5.00s
WALL TO WALL TURNING RADIUS	16.500m

NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS, ANY DISCREPANCIES, ERRORS OR OMISSIONS TO BE BROUGHT TO THE ATTENTION OF OVERSEEING ORGANISATION.
2. CONCEPT DESIGNS ONLY. SUBJECT TO DETAILED DESIGN

INFORMATION

Rev	Date	Description	CAD	Chk	App
	20.07.2018	DCO Submission	-	-	-

nationalgrid

Site: NWC

Scheme Name: NORTH WALES CONNECTION

Document Title: BRAINT PERMANENT ACCESS SWEPT PATH ANALYSIS

Creator:	Checker:	Approver:	Sheet Number:
JF	PG	AL	60514717-OM-003

Document Type:	Scale	Format	Sheets:	Rev:
FIGURE	NTS	A1 / A3	1 of 1	-

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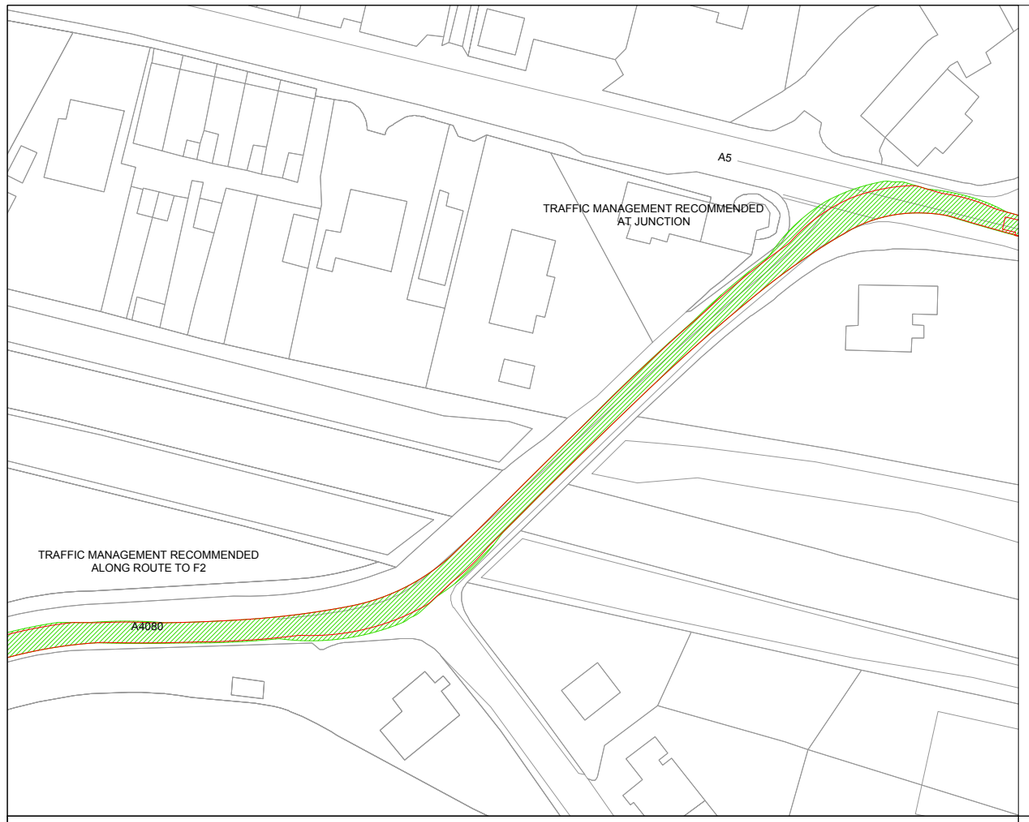
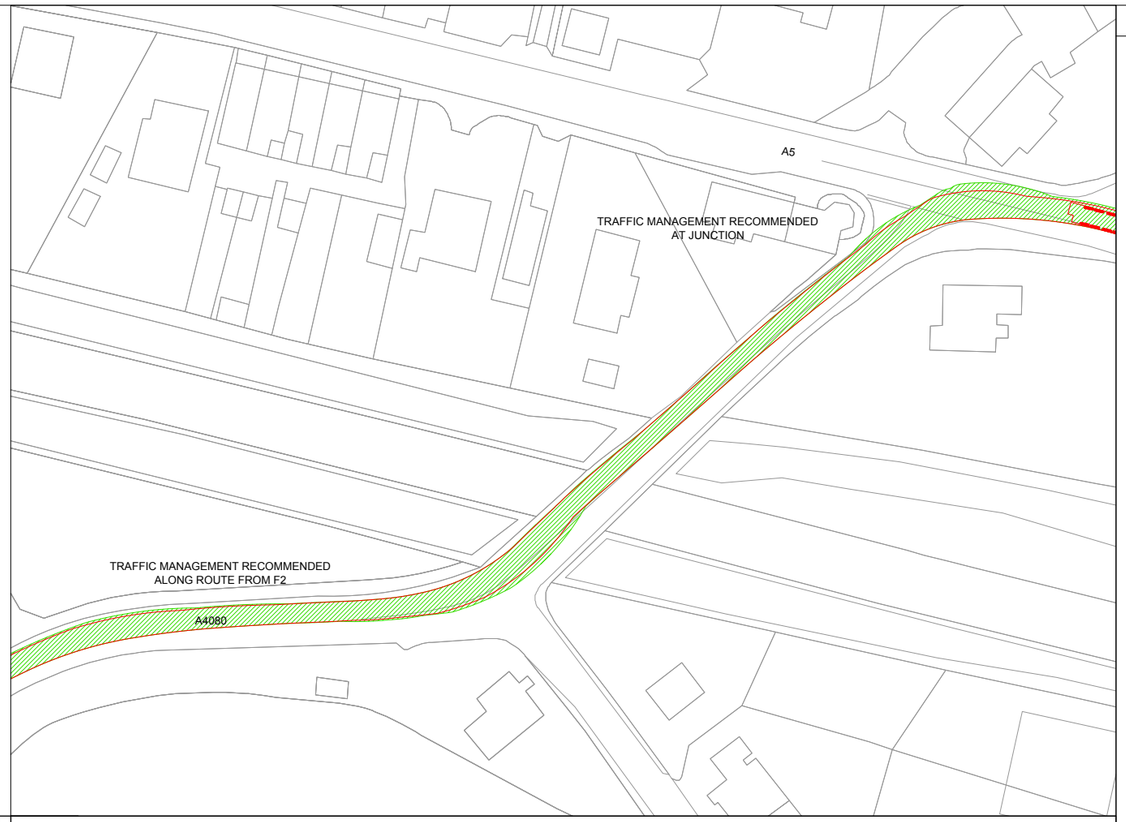
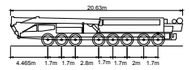


1in40 YEAR OR UNPLANNED EVENT - TOLLGATE JUNCTION ACCESS ASSUMED VEHICLE 400t CRANE

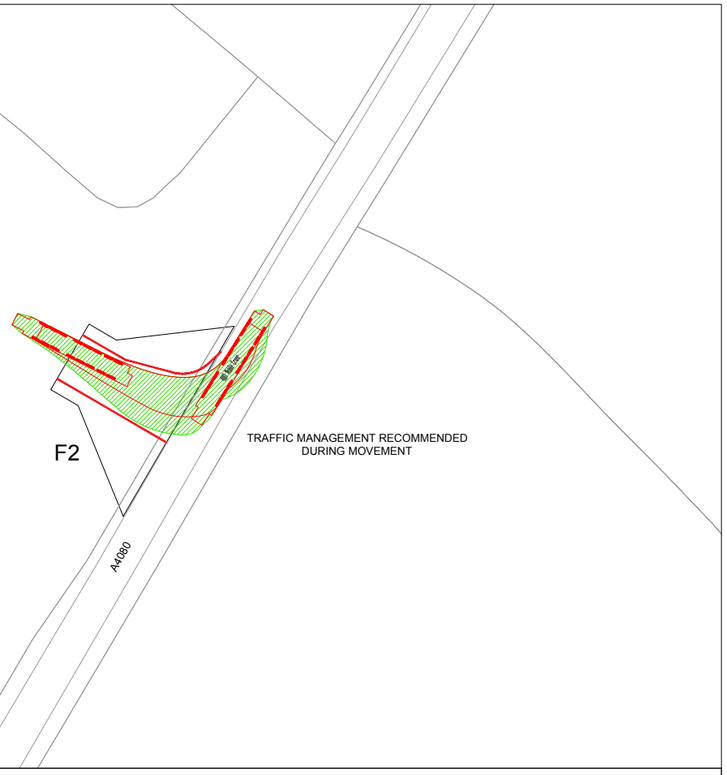


1in40 YEAR OR UNPLANNED EVENT - TOLLGATE JUNCTION EGRESS ASSUMED VEHICLE 400t CRANE

SWEPT PATH PROFILE - 400T MOBILE CRANE



OVERALL LENGTH	20.630m
OVERALL WIDTH	3.000m
OVERALL BODY HEIGHT	3.536m
MIN BODY GROUND CLEARANCE	0.740m
MAX TRACK WIDTH	3.000m
LOCK TO LOCK TIME	5.00s
WALL TO WALL TURNING RADIUS	16.500m



1in40 YEAR OR UNPLANNED EVENT - ACCESS ASSUMED VEHICLE 400t CRANE

1in40 YEAR OR UNPLANNED EVENT - EGRESS ASSUMED VEHICLE 400t CRANE

N

NOTES

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INFORMATION

Rev	Date	Description	CAD	Chk	App
	20.07.2018	DCO Submission	-	-	-

nationalgrid

Site: NWC

Scheme Name: NORTH WALES CONNECTION

Document Title: BRAINT PERMANENT ACCESS SWEPT PATH ANALYSIS

Creator:	Checker:	Approver:	Sheet Number:
JF	PG	AL	60514717-OM-004

Document Type:	Scale	Format	Sheets:	Rev:
FIGURE	NTS	A1 / A3	1 of 1	-

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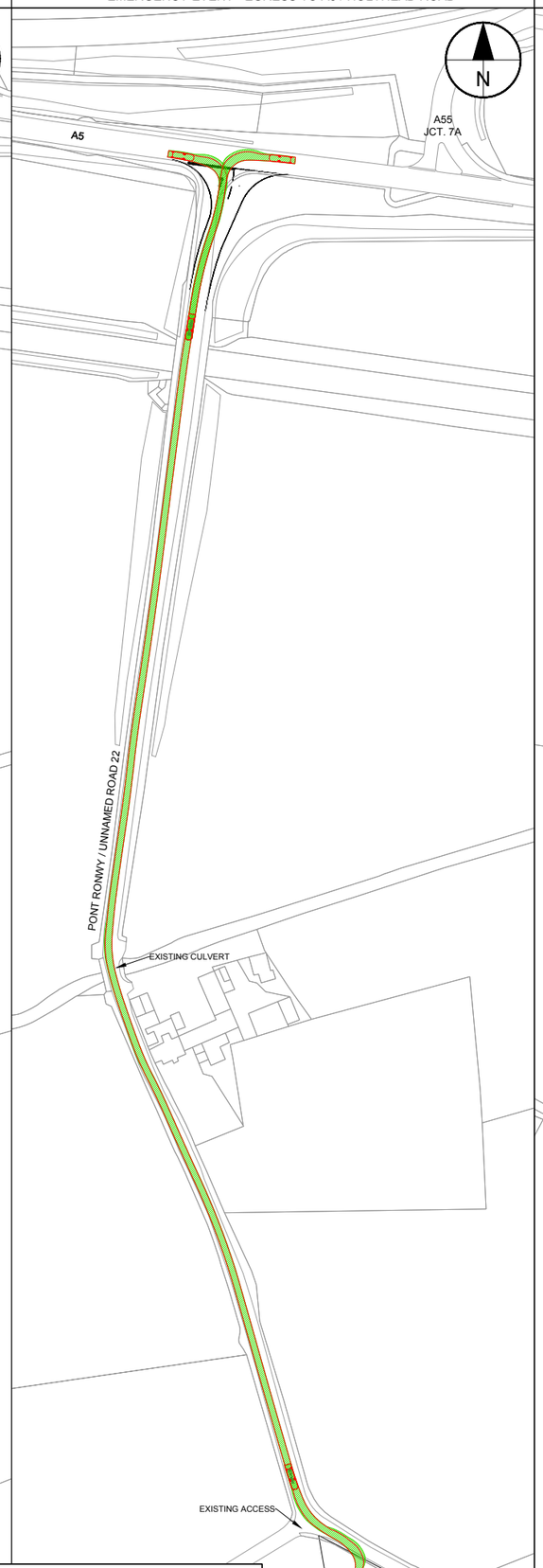
EMERGENCY EVENT - ACCESS FROM A5 / HOLYHEAD ROAD

EMERGENCY EVENT - EGRESS TO A5 / HOLYHEAD ROAD



EMERGENCY EVENT - ACCESS FROM A4080

EMERGENCY EVENT - EGRESS TO A4080

SWEPT PATH PROFILE - DB32 FIRE TENDER

DB32 Fire Appliance	
Overall Length	8.680m
Overall Width	2.185m
Overall Body Height	3.430m
Min Body Ground Clearance	0.337m
Max Track Width	2.185m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	7.910m

NOTES

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INFORMATION

Rev	Date	Description	CAD	Chk	App
	20.07.2018	DCO Submission	-	-	-

nationalgrid

Site: NWC

Scheme Name: NORTH WALES CONNECTION

Document Title: BRAINT PERMANENT ACCESS SWEPT PATH ANALYSIS

Creator:	Checker:	Approver:	Sheet Number:
JF	PG	AL	60514717-OM-005

Document Type:	Scale	Format	Sheets:	Rev:
FIGURE	NTS	A1 / A3	1 of 1	-

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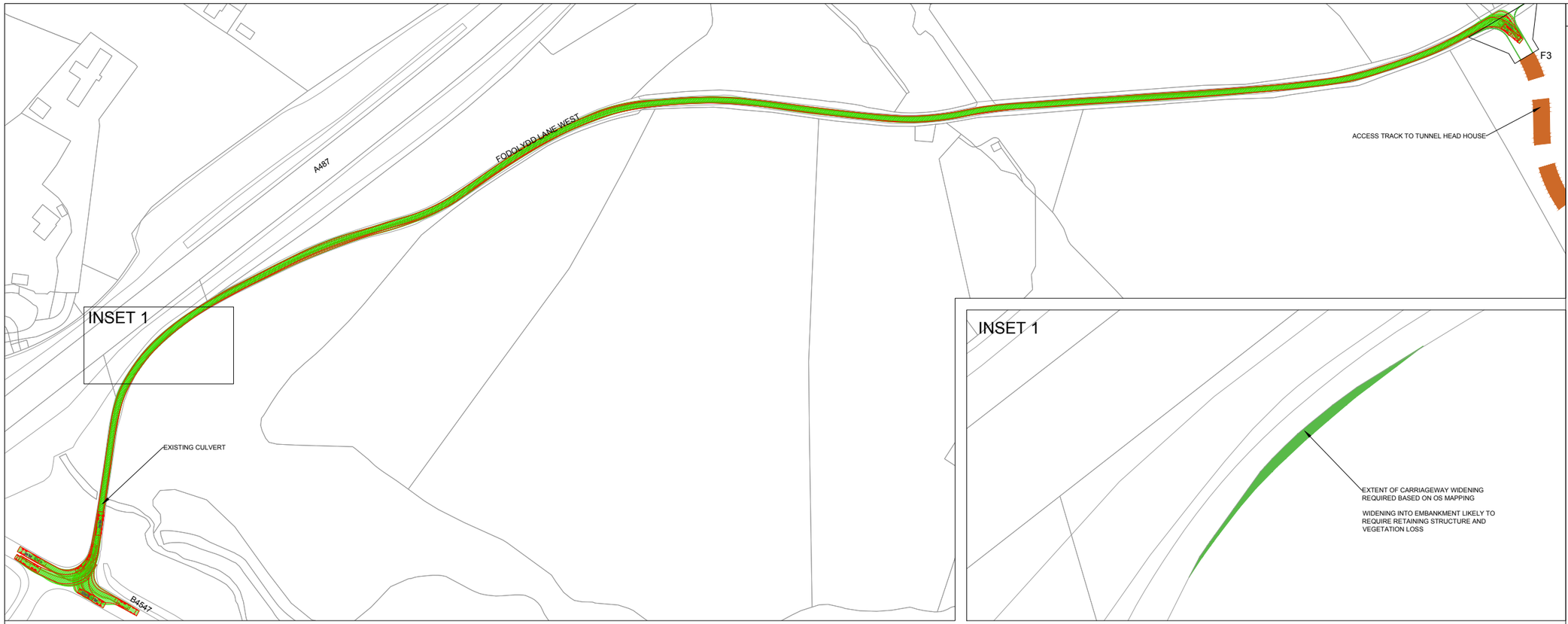
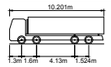


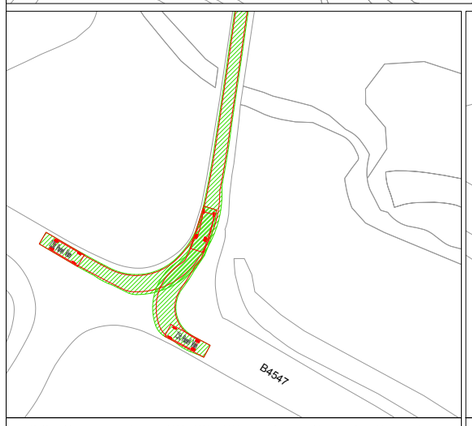
SWEPT PATH PROFILE - 7.5T PANEL VAN

OVERALL LENGTH	7.210m
OVERALL WIDTH	2.192m
OVERALL BODY HEIGHT	2.544m
MIN BODY GROUND CLEARANCE	0.316m
TRACK WIDTH	1.865m
LOCK TO LOCK TIME	4.00s
KERB TO KERB TURNING RADIUS	7.400m

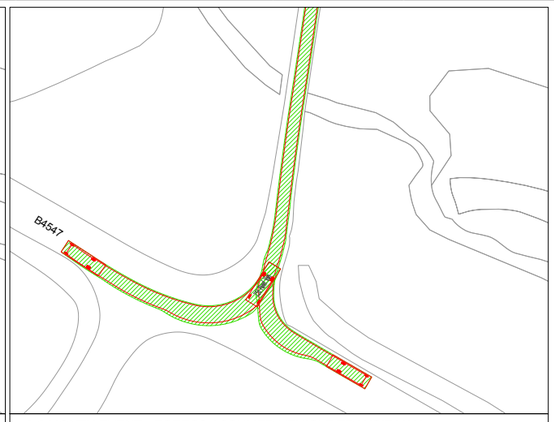
SWEPT PATH PROFILE - LARGE TIPPER



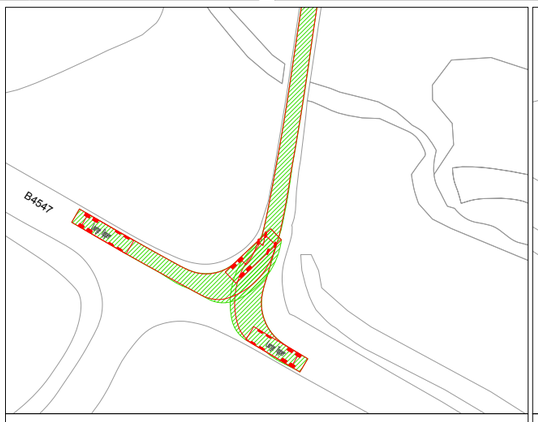
OVERALL LENGTH	10.201m
OVERALL WIDTH	2.500m
OVERALL BODY HEIGHT	2.893m
MIN BODY GROUND CLEARANCE	0.343m
MAX TRACK WIDTH	2.500m
LOCK TO LOCK TIME	6.00s
KERB TO KERB TURNING RADIUS	11.550m



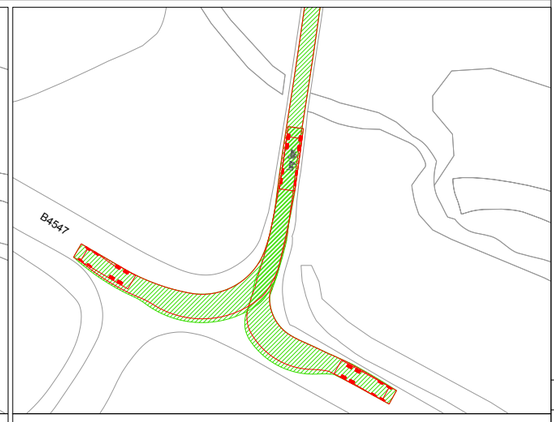
3-6 MONTH EVENT - ACCESS ASSUMED VEHICLE TRANSIT VAN



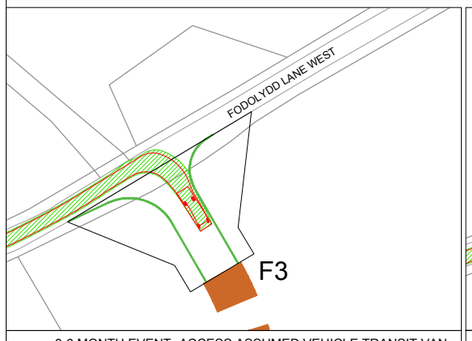
3-6 MONTH EVENT - EGRESS ASSUMED VEHICLE TRANSIT VAN



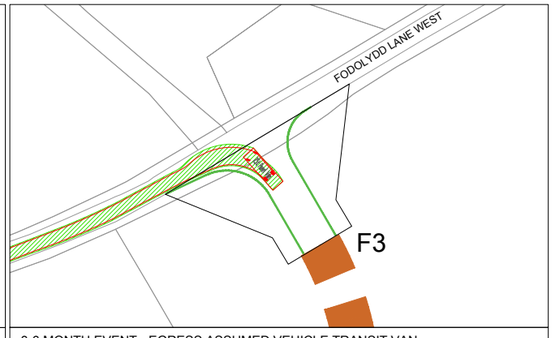
3-6 MONTH EVENT - ACCESS - ASSUMED VEHICLE - LARGE TIPPER



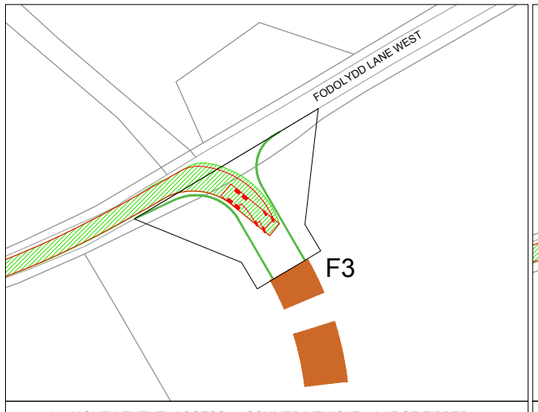
3-6 MONTH EVENT- EGRESS - ASSUMED VEHICLE - LARGE TIPPER



3-6 MONTH EVENT- ACCESS ASSUMED VEHICLE TRANSIT VAN



3-6 MONTH EVENT - EGRESS ASSUMED VEHICLE TRANSIT VAN



3-6 MONTH EVENT- ACCESS - ASSUMED VEHICLE - LARGE TIPPER

3-6 MONTH EVENT - EGRESS - ASSUMED VEHICLE - LARGE TIPPER

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NOTES

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2. CONCEPT DESIGNS ONLY. SUBJECT TO DETAILED DESIGN

INFORMATION

Rev	Date	Description	CAD	Chk	App
	20.07.2018	DCO Submission	-	-	-

nationalgrid

Site: NWC

Scheme Name: NORTH WALES CONNECTION

Document Title: TY FODOL PERMANENT ACCESS SWEPT PATH ANALYSIS

Creator:	Checker:	Approver:	Sheet Number:
JF	PG	AL	60514717-OM-006

Document Type:	Scale	Format	Sheets:	Rev:
FIGURE	NTS	A1 / A3	1 of 1	-

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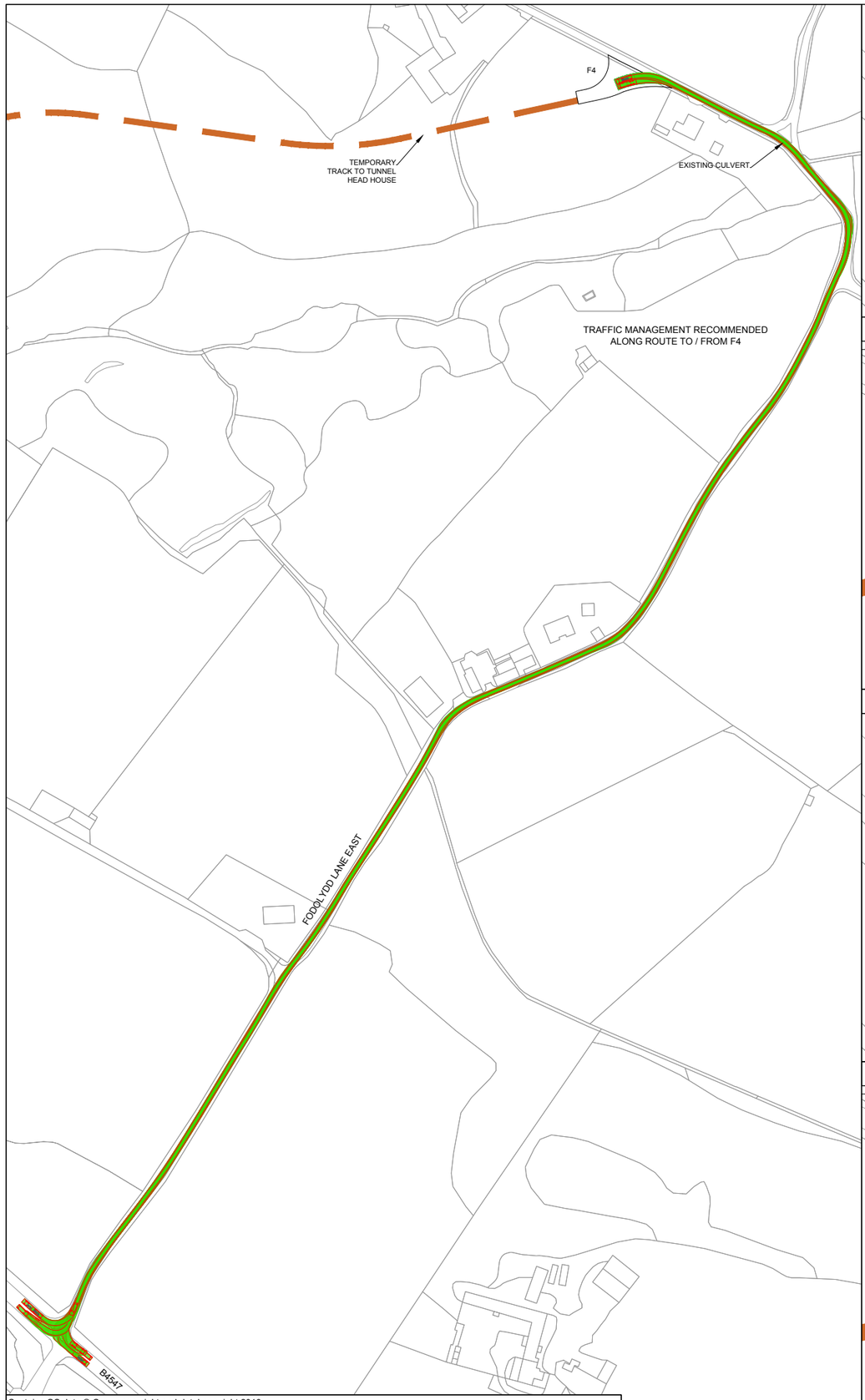

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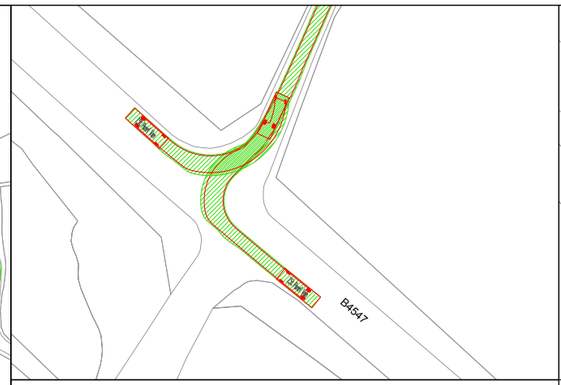
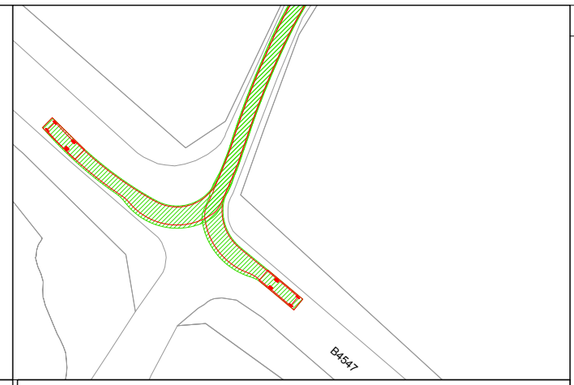


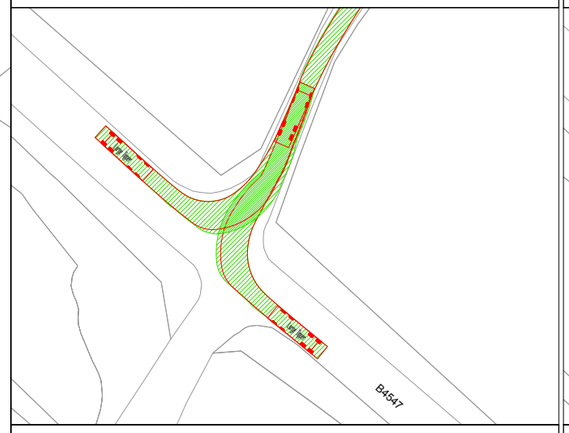
3-6 MONTH EVENT - ACCESS ASSUMED VEHICLE TRANSIT VAN



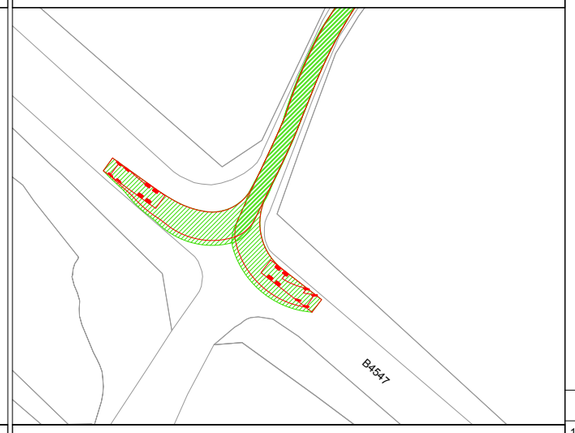
3-6 MONTH EVENT - EGRESS ASSUMED VEHICLE TRANSIT VAN

3-6 MONTH EVENT - ACCESS ASSUMED VEHICLE TRANSIT VAN

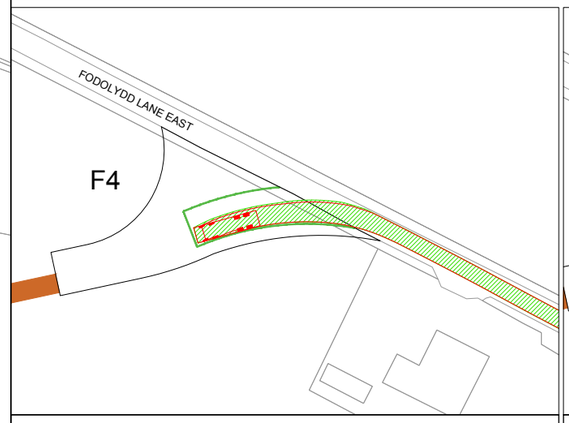
3-6 MONTH EVENT - EGRESS ASSUMED VEHICLE TRANSIT VAN



3-6 MONTH EVENT - ACCESS - ASSUMED VEHICLE - LARGE TIPPER



3-6 MONTH EVENT- EGRESS - ASSUMED VEHICLE - LARGE TIPPER



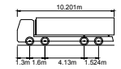
3-6 MONTH EVENT - ACCESS - ASSUMED VEHICLE - LARGE TIPPER

3-6 MONTH EVENT - EGRESS - ASSUMED VEHICLE - LARGE TIPPER

SWEPT PATH PROFILE - 7.5T PANEL VAN

OVERALL LENGTH	7.210m
OVERALL WIDTH	2.192m
OVERALL BODY HEIGHT	2.544m
MIN BODY GROUND CLEARANCE	0.316m
TRACK WIDTH	1.865m
LOCK TO LOCK TIME	4.00s
KERB TO KERB TURNING RADIUS	7.400m

SWEPT PATH PROFILE - LARGE TIPPER



OVERALL LENGTH	10.201m
OVERALL WIDTH	2.500m
OVERALL BODY HEIGHT	2.893m
MIN BODY GROUND CLEARANCE	0.343m
MAX TRACK WIDTH	2.500m
LOCK TO LOCK TIME	6.00s
KERB TO KERB TURNING RADIUS	11.550m

N

NOTES

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2. CONCEPT DESIGNS ONLY. SUBJECT TO DETAILED DESIGN

INFORMATION

Rev	Date	Description	CAD	Chk	App
	20.07.2018	DCO Submission	-	-	-

nationalgrid

Site: NWC

Scheme Name: NORTH WALES CONNECTION

Document Title: TY FODOL PERMANENT ACCESS SWEPT PATH ANALYSIS

Creator:	Checker:	Approver:	Sheet Number:
JF	PG	AL	60514717-OM-007

Document Type:	Scale	Format	Sheets:	Rev:
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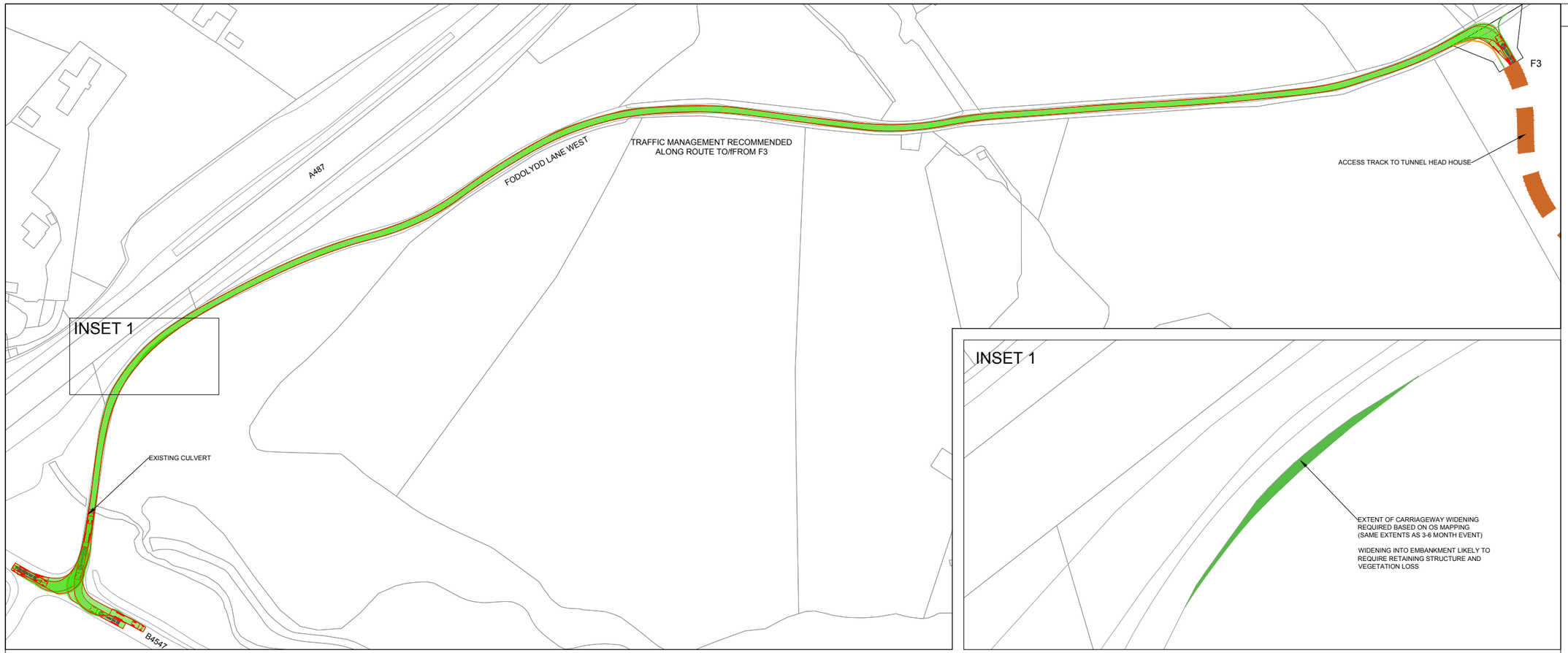
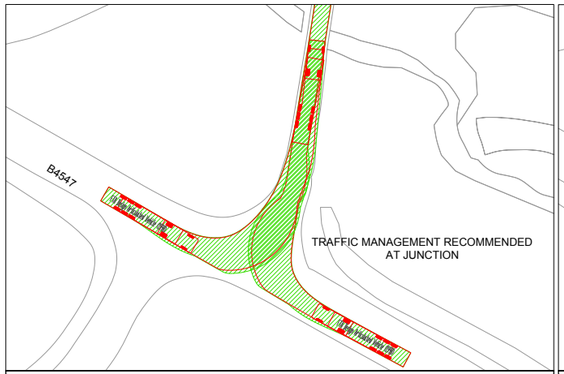
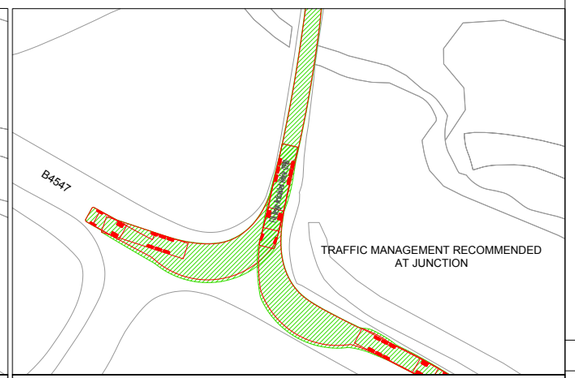
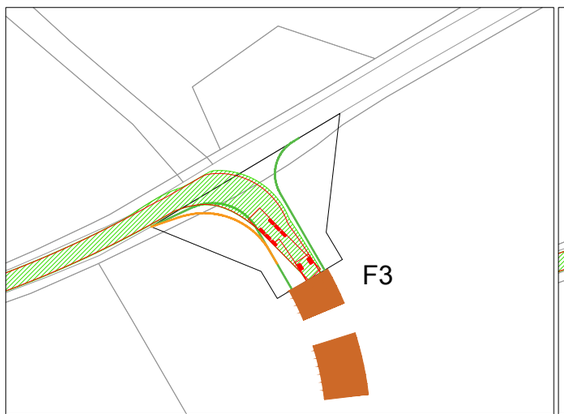




1in10 / 20 YEAR EVENT - ACCESS ASSUMED VEHICLE 16.5m ARTICULATED VEHICLE

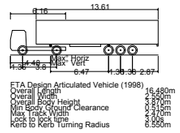


1in10 / 20 YEAR EVENT - EGRESS ASSUMED VEHICLE 16.5m ARTICULATED VEHICLE



1in10 / 20 YEAR EVENT - ACCESS ASSUMED VEHICLE 16.5m ARTICULATED VEHICLE

1in10 / 20 YEAR EVENT- EGRESS ASSUMED VEHICLE 16.5m ARTICULATED VEHICLE



FTA Design Articulated Vehicle (1998)

Overall Length	16.480m
Overall Width	2.550m
Overall Body Height	3.810m
Min Body Ground Clearance	0.315m
Max Track Width	2.470m
Lock to lock time	4.0s
Kerb to Kerb Turning Radius	6.550m

N

NOTES

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Rev	Date	Description	CAD	Chk	App
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nationalgrid

Site: NWC

Scheme Name: NORTH WALES CONNECTION

Document Title: TY FODOL PERMANENT ACCESS SWEPT PATH ANALYSIS

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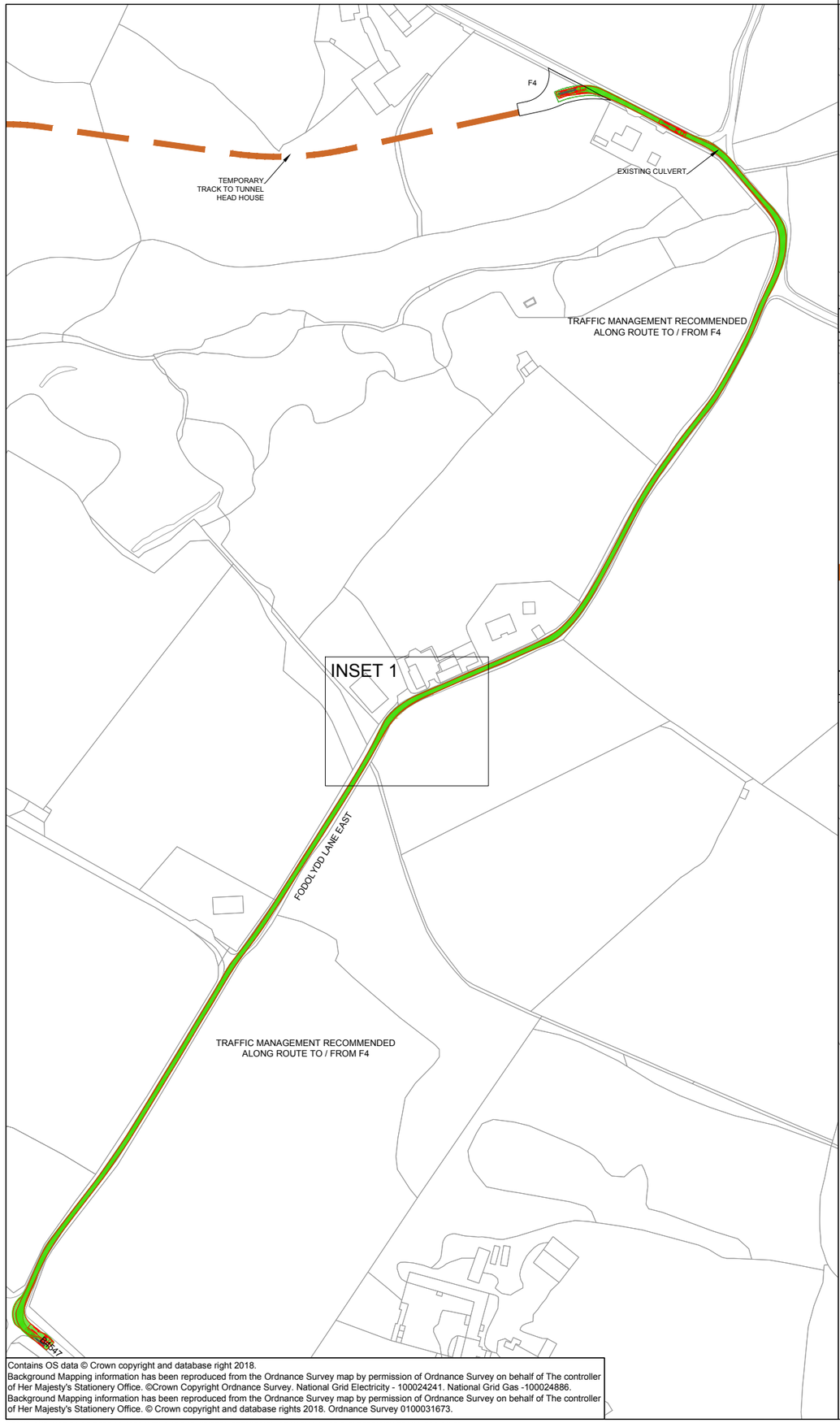
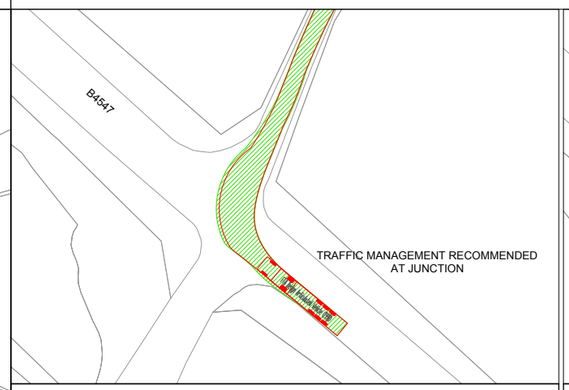
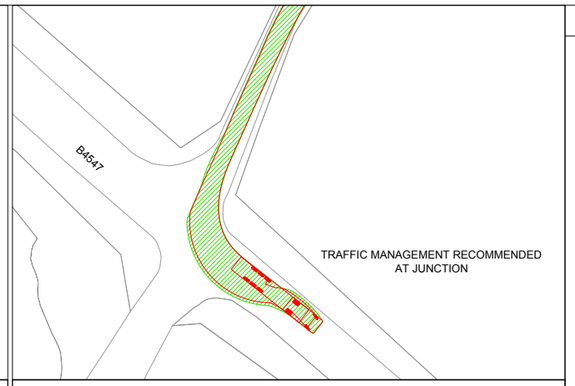
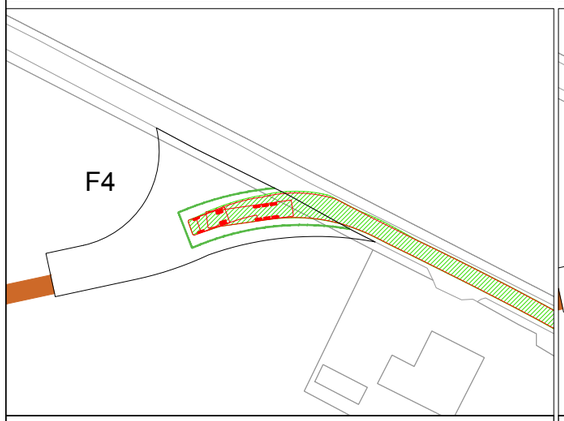




1in10 / 20 YEAR EVENT - ACCESS ASSUMED VEHICLE 16.5m ARTICULATED VEHICLE

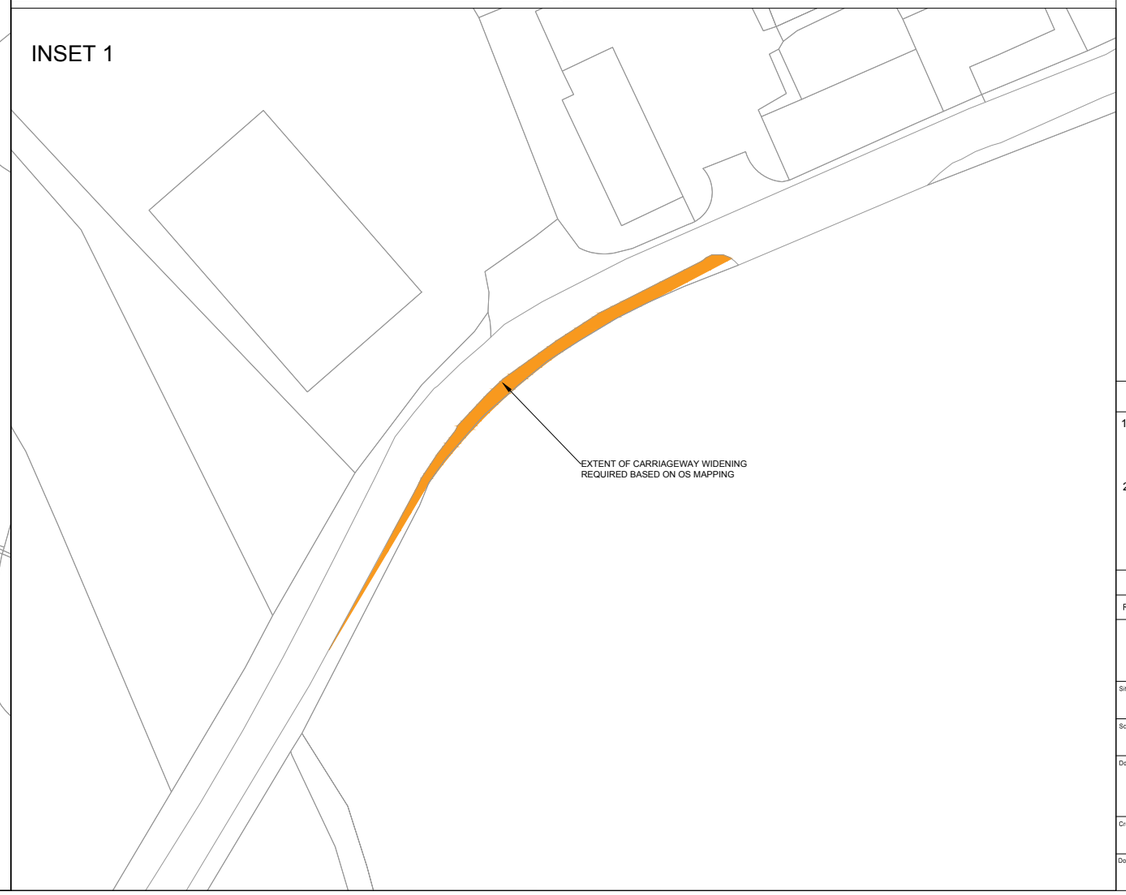


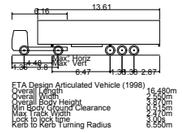
1in10 / 20 YEAR EVENT - EGRESS ASSUMED VEHICLE 16.5m ARTICULATED VEHICLE



1in10 / 20 YEAR EVENT - ACCESS ASSUMED VEHICLE 16.5m ARTICULATED VEHICLE

1in10 / 20 YEAR EVENT - EGRESS ASSUMED VEHICLE 16.5m ARTICULATED VEHICLE





ETA Design Articulated Vehicle (1998)

Overall Length	16.480m
Overall Body Height	4.570m
Max Body Height	4.300m
Min Body Ground Clearance	0.515m
Max Track Width	2.410m
Lock to lock time	9.00s
Kerb to Kerb Turning Radius	6.550m

N

NOTES

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INFORMATION

Rev	Date	Description	CAD	Chk	App
	20.07.2018	DCO Submission	-	-	-

nationalgrid

Site: NWC

Scheme Name: NORTH WALES CONNECTION

Document Title: TY FODOL PERMANENT ACCESS SWEPT PATH ANALYSIS

Creator:	Checker:	Approver:	Sheet Number:
JF	PG	AL	60514717-OM-009

Document Type:	Scale	Format	Sheets:	Rev:
FIGURE	NTS	A1 / A3	1 of 1	-

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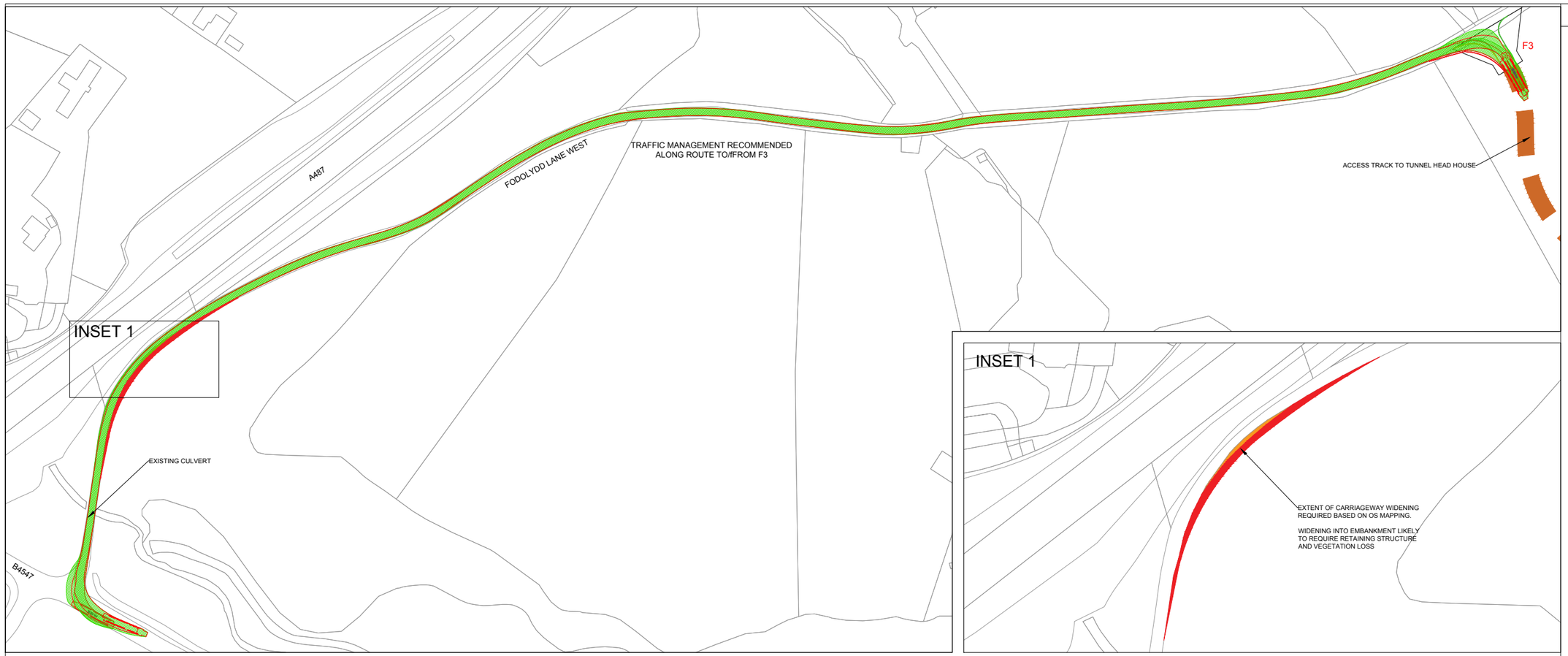
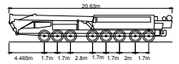
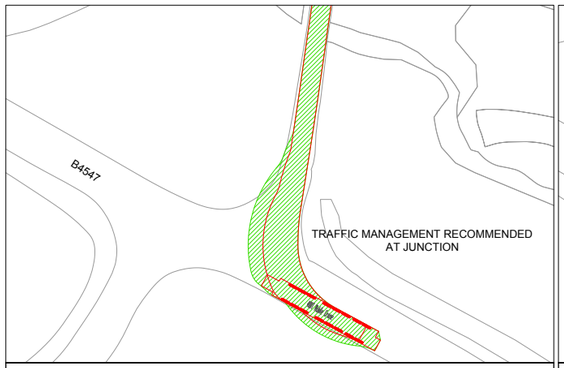


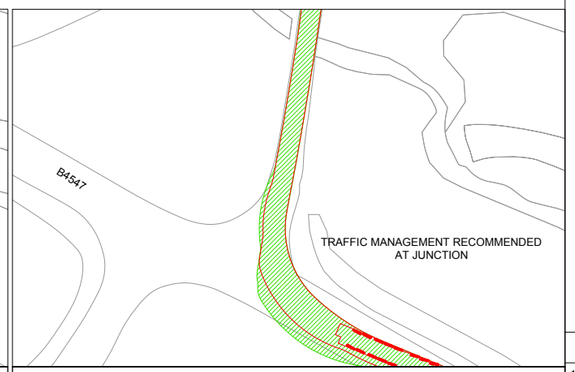
SWEPT PATH PROFILE - 400T MOBILE CRANE



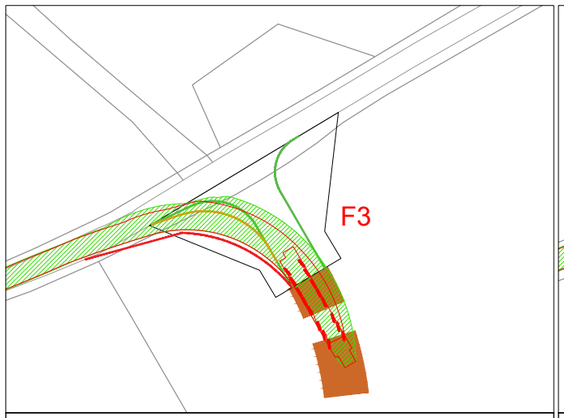
OVERALL LENGTH	20.630m
OVERALL WIDTH	3.000m
OVERALL BODY HEIGHT	3.536m
MIN BODY GROUND CLEARANCE	0.740m
MAX TRACK WIDTH	3.000m
LOCK TO LOCK TIME	5.00s
WALL TO WALL TURNING RADIUS	16.500m



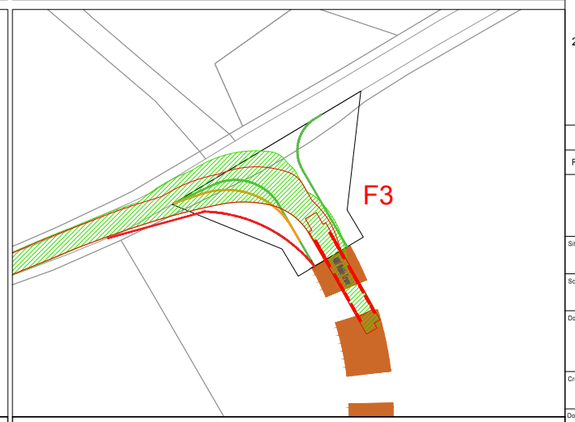
1in40 YEAR OR UNPLANNED EVENT - ACCESS ASSUMED VEHICLE 400t CRANE



1in40 YEAR OR UNPLANNED EVENT - EGRESS ASSUMED VEHICLE 400T CRANE



1in40 YEAR OR UNPLANNED EVENT - ACCESS ASSUMED VEHICLE 400T CRANE



1in40 YEAR OR UNPLANNED EVENT - EGRESS ASSUMED VEHICLE 400T CRANE

N

NOTES

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INFORMATION

Rev	Date	Description	CAD	Chk	App
	20.07.2018	DCO Submission	-	-	-

nationalgrid

Site: NWC

Scheme Name: NORTH WALES CONNECTION

Document Title: TY FODOL PERMANENT ACCESS SWEPT PATH ANALYSIS

Creator:	Checker:	Approver:	Sheet Number:
JF	PG	AL	60514717-OM-010

Document Type:	Scale	Format	Sheets:	Rev:
FIGURE	NTS	A1 / A3	1 of 1	-

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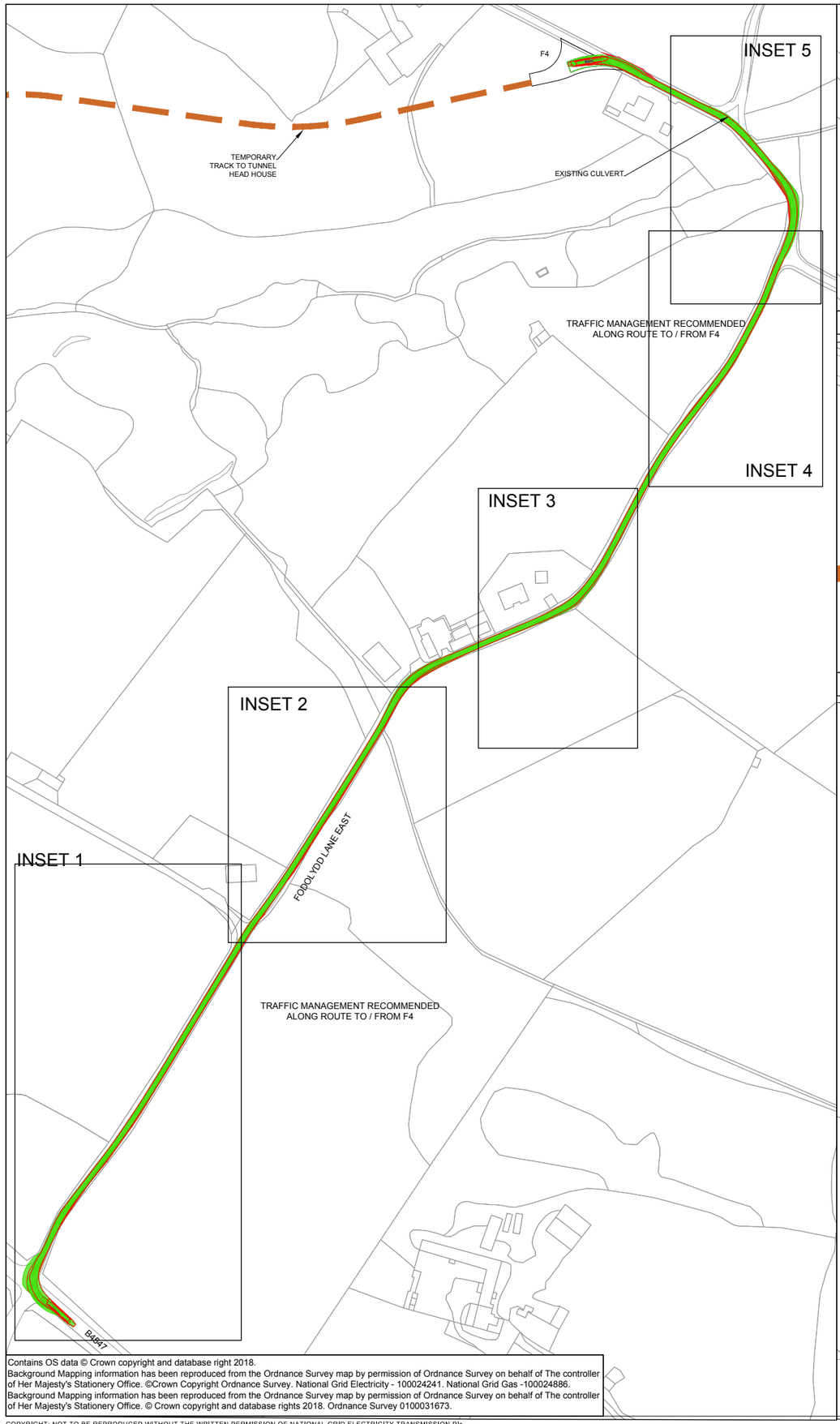

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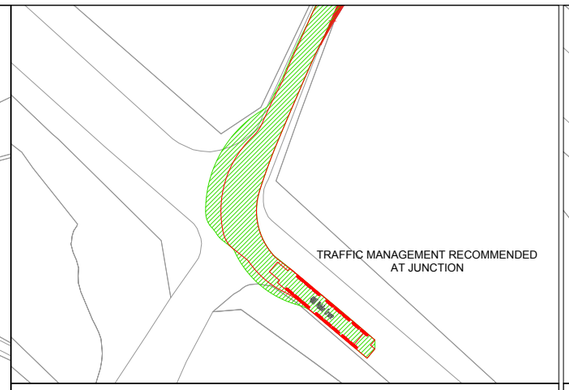
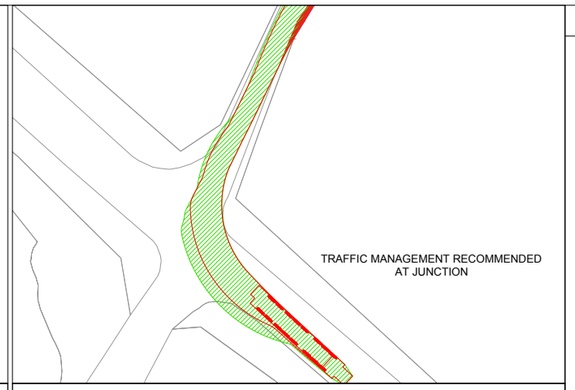


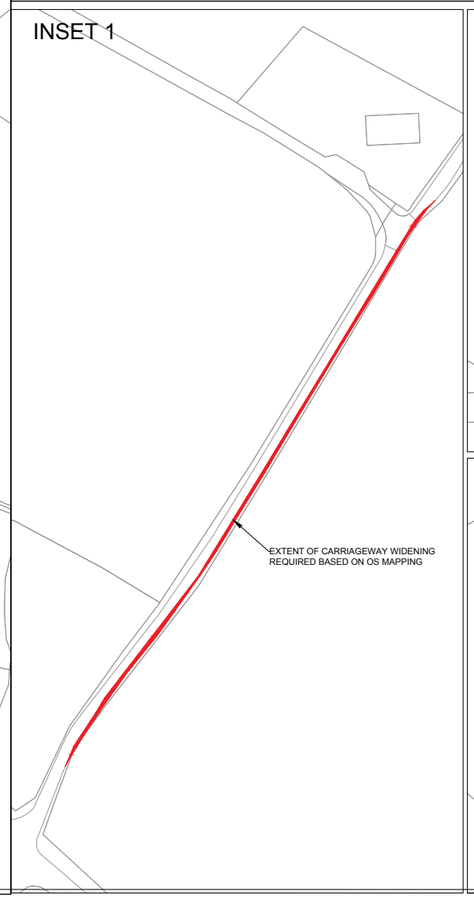
1in40 YEAR OR UNPLANNED EVENT- ACCESS ASSUMED VEHICLE 400T CRANE

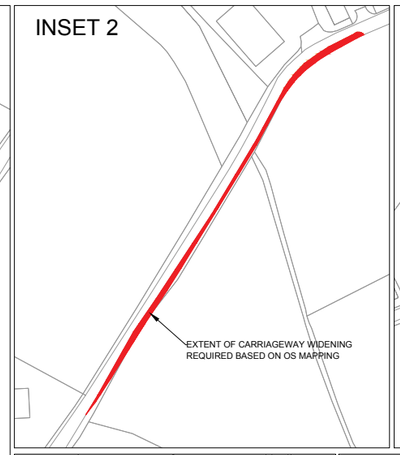


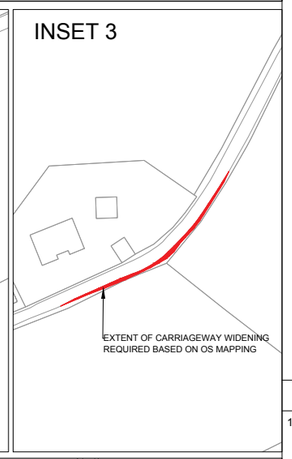
1in40 YEAR OR UNPLANNED EVENT - EGRESS ASSUMED VEHICLE 400T CRANE

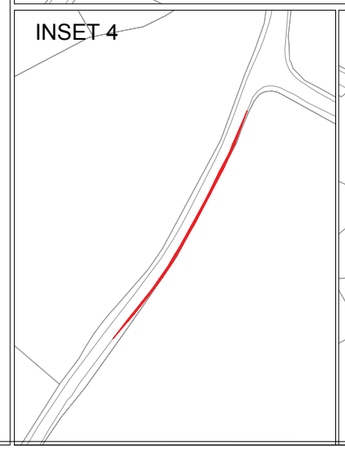
1in40 YEAR OR UNPLANNED EVENT - ACCESS ASSUMED VEHICLE 400T CRANE

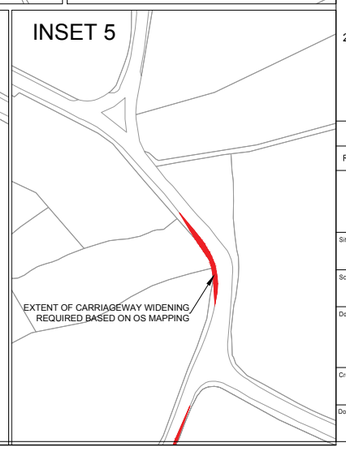
1in40 YEAR OR UNPLANNED EVENT - EGRESS ASSUMED VEHICLE 400T CRANE



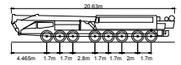








SWEPT PATH PROFILE - 400T MOBILE CRANE



OVERALL LENGTH	20.630m
OVERALL WIDTH	3.000m
OVERALL BODY HEIGHT	3.536m
MIN BODY GROUND CLEARANCE	0.740m
MAX TRACK WIDTH	3.000m
LOCK TO LOCK TIME	5.00s
WALL TO WALL TURNING RADIUS	16.500m

N

NOTES

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INFORMATION

Rev	Date	Description	CAD	Chk	App
	20.07.2018	DCO Submission	-	-	-

nationalgrid

Site: NWC

Scheme Name: NORTH WALES CONNECTION

Document Title: TY FODOL PERMANENT ACCESS SWEPT PATH ANALYSIS

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JF	PG	AL	60514717-OM-011

Document Type:	Scale	Format	Sheets:	Rev:
FIGURE	NTS	A1 / A3	1 of 1	-

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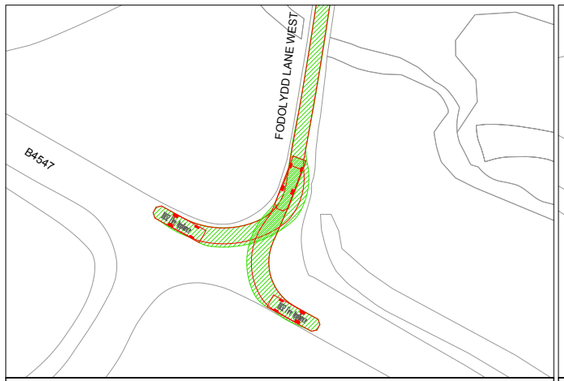
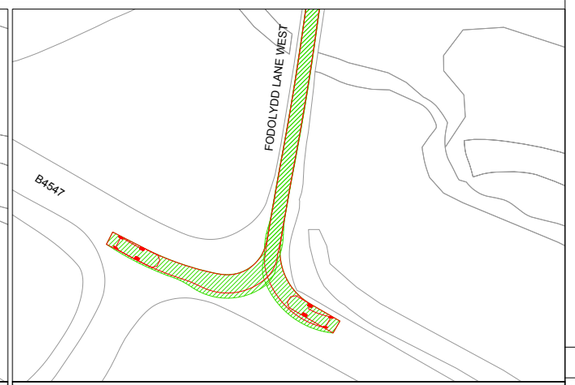
SWEPT PATH PROFILE - DB32 FIRE TENDER

DB32 Fire Appliance	
Overall Length	8.680m
Overall Width	2.550m
Overall Body Height	3.100m
Min Body Ground Clearance	0.737m
Max Track Width	2.500m
Lock to Lock Time	4.000s
Kerb to Kerb Turning Radius	7.700m



EMERGENCY EVENT - ACCESS ASSUMED VEHICLE DB32 FIRE TENDER



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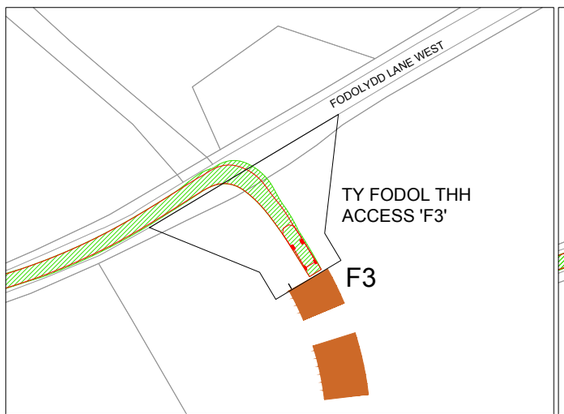
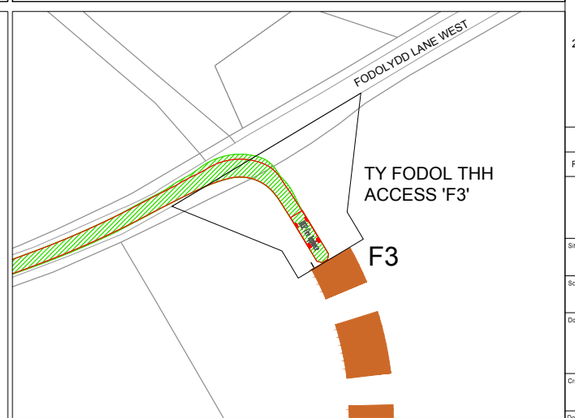


EMERGENCY EVENT - ACCESS ASSUMED VEHICLE DB32 FIRE TENDER



EMERGENCY EVENT - EGRESS ASSUMED VEHICLE DB32 FIRE TENDER

N

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